UNITED STATES DEPARTMENT OF COMMERCE
OFFICE OF TECHNICAL SERVICES
WASHINGTON 25, D. C.

TECHNICAL TRANSLATIONS

Volume 2 Number 10 Pages 681-756 November 20, 1959

BIBLIOGRAPHY

SOVIET SCIENTIFIC PERIODICALS CURRENTLY IN THE APPLIED PHYSICS LABORATORY LIBRARY: DESCRIPTIVE LIST. 27 July 59 [32]p. TS 230-T171.
Order from OTS $0.75 59-21126

This revision of 59-11870 (TG 230-T1) was prepared in order to bring the list of APL Library holdings of Soviet scientific periodicals up to date and to indicate the changes that have occurred since the publication of the first document. As in the original issue, journals are listed alphabetically under broad subject headings. A total of 65 Russian-language periodicals are listed by transliterated title followed by an English translation in parentheses. English titles of translated journals are followed by Russian titles in parentheses. Periodicals received both in the original and in translation appear in consecutive order. Translated journals are usually available from six months to a year after publication of the original.

TRANSLATIONS SERVICE ACCESSIONS. 3 Aug 59 [36]p. TG 230-T123.
Order from OTS $0.75 59-21127

Library of Congress, Washington, D. C.
MONTHLY INDEX OF RUSSIAN ACCESSIONS. Oct 59, 325p.
Order from GPO $12.00/year

This index is a record of the publications in languages spoken in the Soviet Union currently received by the Library of Congress and a group of cooperating libraries. It consists of three parts: Part A lists monographic literature published after 1944, with the title in the original language preceded by its English translation; Part B lists periodicals published after 1946, with their tables of contents translated into English; Part C constitutes a subject guide to both the monographs and periodical articles listed in Parts A and B.

AGRICULTURE

Fischer-Schlemm, W. E. and Scheffter, H. UNIVERSAL-JOINT POWER TRANSMISSION FOR AGRICULTURAL TRACTORS. [1959] [16]p. (12 figs. 2 tables omitted) 10 refs.
Order from SLA mi$2.40, ph$3.30 59-17872

Trans. of Landtechnische Forschung (West Germany) 1951, v. 1, no. 1, p. 188ff.

Observations gathered from over 300 single experiments indicate that: (1) the play of the sliding shaft should be made as small as possible without thereby provoking grippage; (2) the weight of the intermediate shaft (the sliding shaft) should be the smallest possible; therefore, the distance between joints should be of the shortest, and no clutch should be placed on the intermediate shaft; (3) in designing, every angle component outside the horizontal plane should be avoided, the normal position of the shaft being a stright line; and (4) the ratio between the pin and the joint diameters must be held at the smallest possible value. As in other cases, anti-friction bearings are preferable to plain ones: they increase the efficiency, other conditions being equal. At full load, the angles at the joints can reach higher values. The long life of anti-friction bearings can be secured by the addition of approporiate dust rings.

Animal Husbandry

REFERATIVNYY ZHURNAL. BIOLOGIYA (USSR) 1958, NO. 23 (Soviet Abstracts. Biology). 16 Sep 59, 25p. JPRS: 1899-N.
Order from OTS $1.00 59-13891

Contents:
Section R. Diseases of Farm Animals. Abstracts 105800-105862.

Complete translations of those entries which were originally published in the Sino-Soviet bloc and in Yugoslavia.

THROUGH THE SOVIET UNION (Po Sovetskomu Soyuzu). 29 June 59, 22p. 1 ref. Trans. V1443.
Order from LC or SLA mi$2.70, ph$4.80 59-18310

Trans. of Veterinariya (USSR) 1959, v. 36, no. 5, p. 90-95.

The work of several conferences held within the framework of the USSR Ministry of Agriculture is summarized. Discussions at an all-union conference on botfly control are reported in detail.

THROUGH THE SOVIET UNION (Po Sovetskomy Soyuzu). [1959] 11p. Trans. V1453.
Order from LC or SLA mi$2.40, ph$3.30 59-19260

Trans. of Veterinariya (USSR) 1959, v. 36, no. 6, p. 94-96.

The work of various conferences of veterinarians throughout the USSR is briefly summarized. The problem of correspondence instruction in veterinary medicine is discussed.

Chernyshev, V. and Vasil'chikov, C.
IN THE SCIENTIFIC-TECHNICAL COUNCIL OF THE USSR MINISTRY OF AGRICULTURE (V Nauchno-Tekhnicheskom Sovete MSKH SSSR). [1959] 15p. Trans. V1457.
Order from LC or SLA mi$2.40, ph$3.30 59-19264

Trans. of Veterinariya (USSR) 1959, v. 36, no. 6, p. 91-94.

The work of a conference held under the auspices of the Department of Animal Husbandry at Vaskhnil is reported briefly.

Gannushkin, M. S., Zablotskiy, T. M., and Bessarabov, B. F.
LUMINESCENCE METHOD FOR ACCELERATED DIAGNOSIS OF HOG CHOLERA (Uskorennaya Diagnostika Chumy Sviney Metodom Lyuminestsentsii). [1959] 8p. Trans. V1456.
Order from LC or SLA mi$1.80, ph$1.80 59-19263

Trans. of Veterinariya (USSR) 1959, v. 36, no. 5, p. 70-72.

Ginzburg, A.
IN THE USSR MINISTRY OF AGRICULTURE (V Ministerstve Sel'skogo Khozyaystva SSSR). [1959] 16p. Trans. V1455.
Order from LC or SLA mi$2.40, ph$3.30 59-19262

Trans. of Veterinariya (USSR) 1959, v. 36, no. 6, p. 87-90.

The work of a conference of veterinary experts from the various republics of the Soviet Union is briefly summarized.

Syurin, V. N.
TWENTY FIFTH ANNIVERSARY OF THE STATE SCIENTIFIC-CONTROL INSTITUTE OF VETERINARY PREPARATIONS (Dvadtsatipiatiletiye Gosudarstvennogo Nauchno-Kontrol'nogo Instituta Veterinarnykh Preparatov). 8 Apr 59, 15p. Trans. V1401.
Order from LC or SLA mi$2.40, ph$3.30 59-16146

Trans. of Gosudarstvennyy Nauchno-kontrol'nyy Institut Veterinarnykh Preparatov. Trudy (USSR) 1957, v. 7, p. 3-11.

Plant Cultivation

REFERATIVNYY ZHURNAL. BIOLOGIYA (USSR) 1958 (Soviet Abstracts. Biology).
Order from OTS $1.00 each

Contents:
Section K. Forestry.

No. 20, Abstracts 91487-91562, JPRS: 1825-N, 59-13760
No. 21, Abstracts 95803-95854, JPRS: 1880-N, 59-13864

Complete translations of those entries which were originally published in the Sino-Soviet bloc and in Yugoslavia.

REFERATIVNYY ZHURNAL. BIOLOGIYA (USSR) 1958 (Soviet Abstracts. Biology).
Order from OTS $1.00 each

Contents:
Section M. Cultivated Plants.

No. 8, Abstracts 34560-34905, JPRS: 1821-N, 59-13754
No. 20, Abstracts 91564-91911, JPRS: 1824-N, 59-13759

Complete translations of those entries which were originally published in the Sino-Soviet bloc and in Yugoslavia.

REFERATIVNYY ZHURNAL. BIOLOGIYA (USSR) 1958, NO. 15 (Soviet Abstracts. Biology). 2 Sep 59, 16p. JPRS: 1827-N.
Order from OTS $1.00 59-13762

Contents:
Section N. Weeds and Weed Control. Abstracts 68451-68486.

Complete translations of those entries which were originally published in the Sino-Soviet bloc and in Yugoslavia.

REFERATIVNYY ZHURNAL. BIOLOGIYA (USSR) 1958, NO. 15 (Soviet Abstracts. Biology). 2 Sep 59, 19p. JPRS: 1876-N.
Order from OTS $1.00 59-13861

Contents:
Section O. Plant Diseases. Abstracts 68492-68578.

Complete translations of those entries which were originally published in the Sino-Soviet bloc and in Yugoslavia.

Alekseyev, N. N.
NON-ISOTHERMIC TRANSFER OF MOISTURE IN TOBACCO. [1959] 8p. (7 figs. omitted) 8 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-17798

Trans. of Inst[itut] Pishchevoy Prom[yshlennosti] Trudy (USSR) 1956, no. 8, p. 71-80.

See also 59-17797

Alekseyev, N. N.
THE WATER PERMEABILITY OF TOBACCO IN BULK. [1959] 8p. 3 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-17797

Trans. of Inst[itut] Pishchevoy Prom[yshlennosti] Trudy (USSR) 1956, no. 8, p. 61-69.

The permeability to water of tobacco in bulk decreases with the increasing density γ_O and apparently reaches its minimum value at γ_O max. Such relationship between the permeability to water and the density can be explained by the fact that the stream of water, which passes along the spaces between the leaves, is greater than the stream of water, which passes directly along the leaf tissue. Thus during the hydration and dehydration of tobacco in bulk, water is transfered mainly as steam, along the spaces between the leaves. (Extracted from the report) (See also 59-17798).

Heidenreich, Karl.
MANURE SPREADING MACHINE. [1959] 3p. (3 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-17836

Trans. of German patent 382626, 5 Aug 22.

A manure spreading machine with stirring device consisting of disks moving the material to be spread back and forth is described, characterized by the fact that agitator disks are arranged obliquely in such a manner that the inclination corresponds to the hole spacing, so that their ends in the direction of the longitudinal axis alternately move in part through two spreading holes. The longitudinal axes of the agitator disks on both sides extend somewhat beyond the lateral projected circle, in such a manner that in the direction of the longitudinal axis they reach to some extent into the spreading holes, while in the direction of the transverse axis they merely slide along the edge of the container.

Shklyar, T. N.
TO PREVENT THE DANGER OF SMUT EPIPHYTOTICS ON VIRGIN SOILS (Preduprediť Opasnost' Golovnevykh Epifitotiy na Tselinnykh Zemlyakh). [1959] 3p. (1 fig. omitted). Trans. A-1011.
Order from LC or SLA mi$1.80, ph$1.80 59-16807

Trans. of Zashchita Rastenii ot Vrediteley i Bolezney (USSR) [1959] v. 4, no. 1, p. 18-19.

Tishchenko, G. N., Vaganova, A. D. and Khoptyuk, A. M.
HAS THE NATURE OF SILICATE BACTERIA BEEN STUDIED? (Izuchena-li Priroda Silikatnykh Bakterii?). [1959] 3p. 4 refs. Trans. A-1014.
Order from LC or SLA mi$1.80, ph$1.80 59-16865

Trans. of Zashchita Rastenii ot Vrediteley i Bolezney (USSR) 1959, v. 4, no. 1, p. 33.

Treatment of seed tubers with silicate bacteria lowered the productivity of potatoes and deteriorated their quality. It is concluded that the nature of the activity of silicate bacteria has not been adequately studied.

ASTRONOMY

Astrophysics

Pikel'ner, S. B.
CONTRIBUTION TO THE QUESTION OF THE SPIRAL MOTION OF PROMINENCE KNOTS (K Voprosu o Spiral'nykh Dvizheniyakh Uzlov Protuberantsev). [1959] [11]p. 7 refs. F-TS-9608/V.
Order from LC or SLA mi$2.40, ph$3.30 59-19496

Trans. of Astronomicheskiy Zhurnal (USSR) 1956, v. 33, no. 5, p. 641-645.

It is shown that, under certain conditions, the spiral character of motion may appear as a secondary effect, if the knot has gained a certain velocity which does not coincide with the direction of the magnetic field. The spiral motion of knots is evidently a consequence of the appearance of a current in the direction of motion of the knot, and of the interaction of this current with the magnetic field.

Shklovskiy, I. S.
ARTIFICIAL SATELLITES OF MARS (Iskusstvennyye Sputnike Marsa). 27 May 59 [5]p. AF 1255838.
Order from LC or SLA mi$1.80, ph$1.80 59-16966

Trans. from Komsomol'skaya Pravda (USSR) 1959, 1 May, p. 6.

In the present verbatim translation of an interview of the Soviet scientist I. S. Shklovskiy with a correspondent for Pravda, the former suggests that the two satellites of Mars (Phobos and Deimos) are of artificial origin.

Sobolev, V. V.
ON THE THEORY OF A NON-STEADY RADIATION FIELD. I, tr. by J. B. Sykes. 1955 [16]p. 8 refs. A. E. R. E. Lib/Trans. 610.
Order from SLA mi$2. 40, ph$3. 30 59-17527

Trans. of Astronomicheskiy Zhurnal (USSR) 1952, v. 29, no. 4, p. 406-417.

The equation is written down which describes the change in intensity of the radiation along a ray, together with the equation relating the energy emitted by an element of volume in the medium to the energy absorbed by that element. This enables us to obtain a differential equation to determine the function $B(\tau, t)$, which is the ratio of the coefficients of emission and absorption. The same problem is then solved by another treatment, indicated in a previous paper (Astron. Zhur. 28: No. 5, 1951). In this, a new quantity is considered, the probability that a light quantum will emerge from a given point in the medium after a given interval of time. If this quantity is known for the medium considered, we can regard as solved all problems on the radiation of the medium which differ only in the position of the light sources and their change in intensity with time. The equation is derived which determines the probability that a quantum will emerge from the medium. This equation is solved for a medium of finite optical thickness, and for one of infinitely great optical thickness. The mean time is determined during which a quantum remains in the medium. Some applications of the theory are indicated. (Extracted from the report)

BEHAVIORAL SCIENCES

Personnel and Training

Ely, P.
THE COMMANDER AND THE EVOLUTION OF WARFARE (La Chef et L'Evolution de la Guerre) tr. by H. H. [1958] 7p. H-2063.
Order from OTS $0. 50 59-11210

Trans. of Revue Militaire d'Information (France) 1957, June, p. 13-17.

Lozhko, K., Komarov, P. and Lozhichevskiy, A.
RADIO TRAINING SITE (Radiopoligon-osnova Uchebno-materiyal'noy Bazy). 4 Mar 59 [7]p. AF 1255601.
Order from LC or SLA mi$1. 80, ph$1. 80 59-16329

Summary trans. of Voyennyy Svyazist (USSR) 1958 [v. 16] no. 7, p. 20-24.

Psychology

Shipkovenskiy, N. S.
THE "INK BLOT" METHOD IN DETERMINING THE CHARACTERISTICS OF THE SIGNAL SYSTEMS IN PERSONS OF DIFFERENT TEMPERATURES. 28 Aug 59, 9p. 5 refs. JPRS: L-950-N.
Order from OTS $0. 50 59-13839

Trans. of Zhurnal Nevropatologii i Psikhiatrii (USSR) 1958, v. 58, no. 11, p. 1326-1332.

The "ink blot" method affords the opportunity to study the influence of the process of consciousness and deliberate activity on the "signal characteristics". In contrast to the association experiment, in which the stimuli are associated with the second signal system (words), the stimuli in this test are addressed to the first signal system. Despite this, the freedom which is permitted to the subject allows a study of the transition of his conscious activity from the objective stage to the logical stage. (Extracted from author's conclusions).

Sukhobskaya, G. S.
DEVELOPMENT OF AUTOMATIC PERFORMANCE OF MENTAL ACTIVITIES. 24 Aug 59, 17p. 12 refs. JPRS: L-953-N.
Order from OTS $0. 50 59-13842

Trans. of Voprosy Psikhologii (USSR) 1958, v. 4, no. 3, p. 74-86.

Experiments are described which indicate that the orthographic habit, in the process of its formation, passes through several stages, each of which is characterized by different degrees of mastery and contraction of the methods of action. In the first stage, the student must learn to use an evolved system of reasoning (which he reproduces aloud) and an analysis of the word on the basis of a scheme. In the second stage, basic importance attaches to analysis according to the scheme, in which there is strengthening of the sequence of operations performed by the students in the process of determining the necessary orthogram. Speech, pronounced aloud, fixes the attention of the student only on separate nodal points in the determination of the orthogram, and it acquires a "condensed" character, becomes situational, and the number of judgments [i. e. steps in reasoning] is considerably reduced below that in the first atage. The features of the third stage of mastery by the students of orthographic habits are a gradual relinquishment of the use of the scheme, and a transition to determination of the orthogram with maximum speed "in the head".

BIOLOGICAL SCIENCES

Riedener, Franz.
APPARATUS, PARTICULARLY FOR DENTAL TREATMENT, tr. by FHB. 2 Apr 59, 8p. (2 figs. omitted).
Order from LC or SLA mi$1. 80, ph$1. 80 59-16191

Trans. of Swiss patent 258,134, Class 116b; patented from 15 Nov 48, applied for 3 Nov 45, pub. 16 Apr 49.

The object of the invention consists of a spray tube connected, by means of a pressure pipe, with a storage tank for rinsing liquid, and a suction conduit separated therefrom and therefore independently movable, which is connected with a collecting tank. This permits in a simple manner a continuous rinsing and sucking of consumed rinsing liquid (possibly together with particles carried along, for instance dental dust produced by drilling or grinding). The relative position of spray tube and suction conduit may be varied at will. (Extracted from the report)

Anatomy and Physiology

REFERATIVNYY ZHURNAL. BIOLOGIYA (USSR) 1958, NO. 10 (Soviet Abstracts. Biology). 29 Aug 59, 74p. JPRS: 1871-N.
Order from OTS $1.00 59-13856

Contents:
Section T. Human and Animal Physiology. Abstracts 45659-46147.

Complete translations of those entries which were originally published in the Sino-Soviet bloc and in Yugoslavia.

Braun, A. A. and Mikhaylov, V. P.
A. A. ZAVARZIN AND N. G. KHLOPIN'S THEORIES OF TISSUE EVOLUTION AND THE PROBLEM OF THEIR CREATIVE SYNTHESIS. 28 Aug 59, 17p. 30 refs. JPRS: L-949-N.
Order from OTS $0.50 59-13838

Trans. of Arkhiv Anatomii, Gistologii, i Embriologii (USSR) 1958, v. 35, no. 3, p. 8-18.

Galkin, A.
THE ROAD TO THE STARS (Doroga k Zvezdam). 9 Mar 59 [2]p. AF 1255588.
Order from LC or SLA mi$1.80, ph$1.80 59-16327

Trans. from Krasnaya Zvezda (USSR) 1958, 25 Nov, p. 3.

People have been for a long time dreaming of the day when the first manned space ship will depart for space. But only now, after building an ICBM and launching sputniks, it has become clear how close is the embodiment of this dream. Scientific and engineering capabilities have increased tremendously. However, for man to undertake a space flight, hard work of many scientists and designing bureaus is needed. They have to solve numerous complex problems and, specifically, the problem of the space ship crew's safe return to the earth. Many of these problems are being investigated under laboratory conditions. Not all of space flight conditions can, however, be recreated and examined on the earth. Soviet scientists in such instances conduct biological tests, such as lifting the animals aboard rockets to an altitude of 100-200 km and even up to 450 km. A test which was unique in this respect was conducted with the aid of Sputnik II, which, as everybody knows it, lifted dog Layka into space. Not long ago we visited a laboratory at an Institute where the four-legged "cosmonauts" receive conditioning for flights into the upper layers of the atmosphere. Special sealed cabins permitting to recreate high-altitude rocket flight conditions are in operation here. They are equipped with automatic instruments which record data on the condition of the canine organism "in flight". The behavior of animals is filmed with special cameras. One of the sealed cabins contained two dogs. Both already had been at an altitude of 200 km. (The translation is presented above in its entirety)

Kevork'yan, A. A.
WORK WITH ULTRAHIGH FREQUENCY IMPULSE GENERATORS FROM THE POINT OF VIEW OF WORK HYGIENE, tr. by Claudius F. Mayer. June 59 [9]p. H 3826.
Order from OTS $0.50 59-21098

Trans. of mono. Rabota s Ul'travysokochastotnymi Impul"snymi Generatorami s Tochki Zreniya Gigiyeny Truda [Moscow] p. 26-30.

Knorre, A. G.
FORTY YEARS OF SOVIET EMBRYOLOGY. 21 Aug 59, 23p. JPRS: L-932-N.
Order from OTS $0.75 59-13825

Trans. of Arkhiv Anatomii, Gistologii, i Embriologii (USSR) 1958, v. 35, no. 2, p. 3-16.

The achievements of Soviet embryology during the past 40 years have retlected, on the one hand, the continuation of the creative tradition of Russian classical embryology of the 19th and early 20th centuries, and on the other, the critical assimilation of the best and most advanced knowledge which has accumulated in the area of the study of individual growth in foreign science; finally, as a third factor - and this is the most important - these achievements have retlected the new features inherent in Soviet science generally. One of the tasks of the present article is to point out separate examples, and inevitably, in the widest sense, these changes in the procedures of working out onto genetic problems which have characterized Soviet embryology during the 40 years of its growth. However, no less important is the task, as indicated by V. I. Lenin, on the anniversary of the great revolution, of concentrating attention on the unsolved tasks, on overcoming deficiencies, and on the prospects for further advances. (Extracted from the report).

Kosmarskaya, Ye. N.
DEVELOPMENT OF AREA 17 OF THE CEREBRAL CORTEX IN HUMANS DURING THE SECOND HALF OF INTRAUTERINE LIFE. 21 Aug 59, 11p. (16 figs. omitted) 5 refs. JPRS: L-933-N.
Order from OTS $0.50 59-13826

Trans. of Arkhiv Anatomii, Gistologii, i Embriologii (USSR) 1958, v. 35, no. 2, p. 30-38.

The growth and differentiation of the nerve cells of area 17 in the course of the second half of intrauterine existence were studied in stillborn fetuses and premature and full-term infants surviving not longer than 24 hours after birth. The brains of premature infants the duration of whose postnatal life exceeds 24 hours are unsuitable for conclusions regarding the normal course of intrauterine growth, since, according to our studies, extrauterine existence of the infant strongly influences the processes of growth and differentiation occurring in the brain. The external granular layer of Shaper in area 17 of the brain of the human fetus disappears during the eighth lunar month. Clear division of layer IV into sub-layers occurs in the seventh lunar month of fetal life. The cortex of area 17 in the human brain discloses its most intensive growth in the course of the last month of normal intrauterine life. During the period of intrauterine life, differentiation of nerve cells of area 17 occurs very slowly. Even in the Meynert cells, which mature comparatively early, a compact basophilic nucleolus appears only during the tenth lunar month. At the moment of normal birth the stellate cells of Cajal are only beginning to be formed. They do not as yet have a definite cell body, their cytoplasm contains almost no basophilic substance, and the nucleolus is only in the initial stages of differentiation. (Author's conclusion)

Langer, Karl.
THE VESSELS OF TUBULAR BONES. CONTRIBUTION TO THE KNOWLEDGE OF THE STRUCTURE AND DEVELOPMENT OF BONE TISSUE (Uber das Gefässsystem der Röhrenknochen, mit Beitragen zur Kenntniss des Baues und der Entwicklung des Knochengewebes) [1959] 66p. (illus. omitted)
Order from SLA mi$3.90, ph$10.80 59-17698

Trans. of Akademie der Wissenschaften, Vienna. Mathematisch-Naturwissenschaftliche Klasse. Denkschriften (Austria) 1876, V. 36.

Pressman, A. S.
METHODS OF EVALUATION OF THE EFFECTIVE ENERGY OF THE ELECTROMAGNETIC FIELDS UNDER INDUSTRIAL CONDITIONS, tr. by Claudius F. Mayer. June 59 [9]p. (3 figs. omitted) 8 refs. H-3825.
Order from OTS $0.50 59-21101

Trans. of mono. Metody Otsenki Deystvuyushchey Energii Elektromagnitnykh Poley v Proizvodstvennykh Usloviyakh [Moscow] 1956, 1 Jan, p. 29-35.

Shmidt, Z. N.
VARIATION IN THE PERMEABILITY OF THE HEMATO-ENCEPHALIC AND HEMATO-OPHTHALMIC BARRIERS WITH LOWERING OF ATMOSPHERIC PRESSURE, tr. by P. V. DePort. 27 Aug 59, 7p. (1 fig. omitted) 16 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-19055

Trans. of Akademiya Nauk. SSSR. Doklady, 1959, v. 126, no. 3, p. 696-698.

Biochemistry

SODIUM CITRATE AND PHENOMENA OF ADSORPTION, tr. by E. L. 21 Aug 51 [2]p. 3 refs.
Order from SLA mi$1.80, ph$1.80 59-17824

Trans. of unidentified [German ?] mono.

Belikov, P. S. and Motorina, M. V.
DIURNAL RHYTHM OF PHOTOSYNTHESIS. [1959] [6]p. 15 refs. no. 179.
Order from LC or SLA mi$1.80, ph$1.80 59-17411

Trans. of Akademiya Nauk SSSR. Doklady, 1958, v. 123 [no. 1] p. 185-188.

Stringless bean plants (variety Saksa) grown for 2 weeks in Knops nutrient solution under carefully controlled conditions of temperature and alternating light (18 hr) and dark (6 hr) showed the known rhythm of photosynthetic intensity in which the maximum corresponds approximately with the midday hours and the minimum with the night hours. Plants grown under almost identical conditions but under continuous fluorescent light also showed a periodical fluctuation of photosynthesis but the rhythm was different. When plants were grown for 2 weeks under conditions of alternating light and dark and then transferred to a condition of continuous illumination the plants retained the original rhythm (i.e., with a daily maximum and nightly minimum) for about 48 hours then the frequency increased and became similar to that previously observed for plants grown under continuous illumination. Results indicate that plants have a hereditary rhythm that is capable of modification.

Théodoresco, Marie.
ON THE APPLICATION OF SOME SPECTROGRAPHIC METHODS (Sur l'Application de Quelques Méthodes Spectrographiques). [1959] [3]p. 1 ref. No. 203.
Order from SLA mi$1.80, ph$1.80 59-17919

Trans. of Academie de Sciences, Paris. Comptes Rendus (France) 1952, v. 235, no. 7, p. 472-473.

Tustanovskiy, A. A., Zaydes, A. L. and others.
NEW RESULTS ON THE STRUCTURE OF COLLAGEN, tr. by J. B. Sykes. 1955 [7]p. 13 refs. A. E. R. E. Lib/Trans. 554.
Order from SLA mi$1.80, ph$1.80 59-17465

Trans. of Akademiya Nauk SSSR. Doklady, 1954, v. 97, no. 1, p. 121-124.

Mirzabekyan, R. O.
ANTIBIOTIC SUBSTANCES OF AN ACTINOMYCETE ORIGIN AGAINST PHYTOPATHOGENIC MICROORGANISMS (Antibioticheskiye Veshchestva Aktinomitsetnogo Proyskhozhdeniya Protiv Fitopatogennykh Mikroorganizmov). [1959] 16p. (3 figs. omitted) 10 refs. Trans. A-1024.
Order from LC or SLA mi$2.40, ph$3.30 59-16819

Trans. of Akademiya Nauk SSSR. [Izvestiya]. Seriya Biologicheskaya, 1959, v. 24, no. 1, p. 103-110.

Shkól'nik, M. Ya. and Steklóva, M. M.
IN REFERENCE TO PHYSIOLOGICAL ROLE OF BORON IN PLANTS (K Voprósu o Fiziologicheskoy Róli Bóra u Rastenii). [1958] [9]p. (1 fig. omitted). 15 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-18555

Trans. of Akad[emiya] Nauk SSSR. Dokl[ady] 1951, v. 77, no. 1, p. 137-140.

General Biology

REF[ERATIVNYY] ZHUR[NAL]. BIOL[OGIYA] (USSR) 1958, NO. 22 (Soviet Abstracts. Biology). 24 Aug 59, 31p. JPRS: 1862-N.
Order from OTS $1.00 59-13846

Contents:
Section B. General Biology. Abstracts 98806-99010.

Complete translations of those entries which were originally published in the Sino-Soviet bloc and in Yugoslavia.

Berg, R. L.
CONFERENCE ON THE APPLICATION OF MATHEMATICAL METHODS IN BIOLOGY (Soveshchaniye po Primeneniyui Matematicheskikh Metodov v Biologii). [1959] 10p. Trans. A-1010.
Order from LC or SLA mi$1.80, ph$1.80 59-16806

Trans. of Bot[anicheskiy] Zhur[nal] (USSR) 1958, v. 43. no. 11, p. 1654-1657.

Topics are noted of reports which were read at the conference held in May 1958 by the Biological Institute of the Leningrad State University. Brief reviews of some of the reports are included.

Dro[zdov] N. S.
MESODERIVATIVES OF ACRIDINE. XIX. 9-(P-DIALKYLAMINOPHENYL)-9-OXY-10ALKYL-9, 10-DIHYDROACRIDINES. [1959] 11p. (6 formulas omitted) 9 refs.
Order from LC or SLA mi$2.40, ph$3.30 59-17826

Trans. of [Zhurnal Obshchey Khimii] (USSR) 1946, v. 16, no. 2, p. 243-250.

Some of the compounds described display a marked parasiticidal effect in experiments with Leptospira cultures.

Kordyum, V. A. and Bobchenko, E. S.
AIR AS AN HABITAT FOR MICROORGANISMS (Vozdukh - Sreda Obitaniya Mikroorganismov). [1959] 13p. (12 figs. omitted) 7 refs. Trans. V1454.
Order from LC or SLA mi$2.40, ph$3.30 59-19261

Trans. of *Mikrobiologiya (USSR) 1959, v. 28, no. 2, p. 231-235.

[Monod, Jacques]
[THE TECHNIQUE OF THE CONTINUOUS CULTURE] [1959] [21]p. (4 figs. omitted) 3 refs.
Order from SLA mi$2.70, ph$4.80 59-17834

Trans. of [Institut Pasteur, Paris. Annales (France) 1950, v. 79, no. 4, p. 390-410.

Sergeyev, V. A.
CONCERNING THE METHOD OF DRYING FOOT-AND-MOUTH DISEASE VIRUS STRAINS TYPE O, A AND C (K Methodike Vysushivaniya Shtandartnykh Shtammov Virusa Yashchura Tipa O, A i C). 20 May 59, 5p. 5 refs. Trans. V1426.
Order from LC or SLA mi$1.80, ph$1.80 59-18301

Trans. of Voprosy Virusologii (USSR) 1959 [v. 4] no. 6, p. 367-368.

Zuikova, E. Yu.
TO THE METHOD OF BACTERIOLOGICAL AIR INVESTIGATION UNDER CONDITIONS OF LOW TEMPERATURES (K Metodike Bakteriologicheskogo Issledovaniya Vozdukha v Usloviyakh Nizkikh Temperatur. [1959] 6p. 2 refs. Trans. V-1464.
Order from LC or SLA mi$1.80, ph$1.80 59-19270

Trans. of Gigiyena i Sanitariya (USSR) 1959 [v. 24] no. 4, p. 77-79.

PROBLEMS OF ONCOLOGY, 1958, VOL. 4, NO. 1. Feb 59, 135p.
Order from PP $30.00/year

Trans. of Voprosy Onkologii (USSR) 1958, v. 4, no. 1, p. 3-128.

PROBLEMS OF ONCOLOGY, 1958, VOL. 4, NO. 2, P. 137-273. Apr 59, 1v.
Order from PP $30.00/year

Trans. of Voprosy Onkologii (USSR) 1958, v. 4, no. 2, p. 131-254.

REFERATIVNYY ZHURNAL. BIOLOGIYA (USSR) 1958, NO. 4 (Soviet Abstracts. Biology). 4 Sep 59, 29p JPRS: 1884-N.
Order from OTS $1.00 59-13867

Contents:
Section U. General Problems of Pathology. Abstracts 18148-18427.

Complete translations of those entries which were originally published in the Sino-Soviet bloc and in Yugoslavia.

Bel'tyukov, V. L. and Masyunin, A. M.
UTILIZATION OF REMNANTS OF HEARING FOR IMPROVING SPEECH OF DEAF-MUTE CHILDREN (Ispol'zovaniye [O]statkov Slukha v Rabote nad Proiznosheniyem u Glukhonemykh Detey). [1959] [14]p. 1 ref.
Order from LC or SLA mi$2.40, ph$3.30 59-17103

Trans. of unidentified mono. Residual Hearing in Hard-of-Hearing and Deaf-Mute Children, Moscow, 1957, p. 88-96.

Dukalov, I. A. and Golosnitskiy, A. K.
CONCERNING THE QUESTION OF INTRAVITAL DIAGNOSIS OF BOTULISM (K Voprosu o Prizhiznennoy Diagnostiki Botulizma. [1959] 9p. 3 refs. Trans. V1445.
Order from LC or SLA mi$1.80, ph$1.80 59-19253

Trans. of *Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii (USSR) 1958 [v. 29] no. 12, p. 43-46.

Laborit, H. and Huguenard, P.
ARTIFICIAL HIBERNATION IN PROFOUND SHOCK (l'Hibernation Artificielle chez le Grand Choqué). [1959] [7]p. (footnotes omitted)
Order from SLA mi$1.80, ph$1.80 59-17593

Trans. of la Presse Médicale (France) 1953, v. 61 [no. 49] p. 1029-1030.

Practical experience in the use of artificial hibernation under war conditions in Indo-China is described and evaluated. The cases so handled include 15 patients with multiple mine wounds, 5 with mortar shell wounds, 6 with bullet wounds, and 12 with multiple abdominal injuries to the liver, small and large intestines.

Le Gac, P. and Giroud, Paul.
VESICULAR RICKETTSIOSIS IN UBANGI-SHARI (FRENCH EQUATORIAL AFRICA). [1959] [6]p.
Order from SLA mi$1.80, ph$1.80 59-15416

Trans. of Soc[iété de] Path[ologie] Exot[ique]. Bull[etin] (France) 1951, v. 44, no. 7/8, p. 413-415.

Léger, Lucien, Lande, M., and Beauvillain, A.
PREVENTIVE ACTION OF NOVOCAIN AGAINST SHOCKS OCCURING DURING INTRAVENOUS ADMINISTRATION OF PROTEINS AND DURING BLOOD TRANSFUSIONS. [1959] [4]p. (3 diagr. omitted) 3 refs.
Order from SLA mi$1.80, ph$1.80 59-17819

Trans. of la Presse Médicale (France) 1949, v. 57 [no. 60] p. 837-838.

Mikhaylov, Z. V.
NEW APPARATUS FOR MASS PROPHYLACTIC VACCINATION AGAINST GRIPPE (Novyy Apparat dlya Massovoy Profilakticheskoy Vaktsinatsii Protiv Grippe). 15 May 59, 3p. Trans. V1425.
Order from LC or SLA mi$1.80, ph$1.80 59-18300

Trans. of *Voprosy Virusologii (USSR) 1958 [v. 3] no. 5, p. 315-316.

Neiman, L. V.
BASIC PROBLEMS OF DEVELOPING SOUND PERCEPTION IN HARD-OF-HEARING SCHOOL CHILDREN (Osnovnyye Voprosy Razvitiya Slukhovogo Vospriyatiya u Tugovkhikh Shkol'nikov). [1959] [13]p. 3 refs.
Order from LC or SLA mi$2.40, ph$3.30 59-17102

Trans. of unidentified mono. Residual Hearing in Hard-of-Hearing and Deaf-Mute Children, Moscow, 1957, p. 55-65.

Pertseva, M. N.
THE EFFECT OF TEMPORARY "EXCLUSION" OF THE HEART FROM CIRCULATION IN CONDITIONS OF HYPOTHERMIA ON THE AMMONIA AND GLUTAMINE CONTENT OF THE BRAIN. [1959] [12]p. 14 refs.
Order from LC or SLA mi$2.40, ph$3.30 59-17371

Trans. of Voprosy Med[itsinskoy] Khimii (USSR) [1958] v. 4, no. 5, p. 379-384.

Oxygen deficiency in the brain caused by a disruption in its blood supply, is followed by a considerable accumulation of ammonia in brain tissue. During

hypoxia of the brain under conditions of hypothermia as distinguished from hypoxia with temperature, an increase of free glutamine content in the brain is observed. Under conditions of hypothermia the process of synthesis predominates over the process of disintegration in the metabolism of free glutamine. As the animals come out of a state of hypothermia after the exclusion of the heart followed by an increased oxygen deficiency in brain tissue there is observed a new increase of free ammonia and an increase in free glutamine in brain tissue. (Author's summary)

Skalaban, D. Ku.
EARLY FULFILLMENT OF THE SEVEN-YEAR PLAN. 25 Aug 59, 4p. JPRS: L-944-N.
Order from OTS $0.50 59-13834

Trans. of Meditsinskaya Promyshlennost' SSSR. 1959 [v. 13] no. 6, p. 3-5.

Soboleva, A. D.
CHANGES IN LUNGS IN LEUKOSIS WHICH HAD BEEN TREATED WITH CONTEMPORARY METHODS OF TREATMENT (Izmeneniya v Legkikh pri Leykozakh Podvergayshikhsya Sovremennym Metodam Lecheniya) tr. by Tatiana Boldyreff. 18 May 59, 7p. 5 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-18147

Trans. of Arkhiv Patologii (USSR) 1956, v. 18, p. 54-56.

The therapeutic methods in question are specific treatment with urethane, x-radiation, and embichine.

Wingler, A.
LES SUBSTANCES CANCERIGENES EN CHIMIE, tr. by Moreau. 31 Mar 59 [4]p. Trans. no. A 562. (text in French).
Order from SLA mi$1.80, ph$1.80 CEA-tr-A562

Trans. in French of Angew[andte] Chem[ie] (West Germany) 1957, v. 69, no. 7, p. 239-240.

Some general statistics on the incidence of neoplasms caused by aromatic amines, tars and radiations are briefly considered. The characteristically long latent period of action of such carcinogens is mentioned. The article as translated appears to have been slanted for the layman.

Zubova, O. B.
THE ANTI-TUMOR ACTION OF A SERIES OF CHLORETHYLAMINO AND ETHYLENEIMINO DERIVATIVES OF PRYIDINE AND PYRIMIDINE. [1959] 3p. No. 2044.
Order from LC or SLA mi$1.80, ph$1.80 59-15256

Trans. from mono. Akademiya Meditsinskikh Nauk SSSR. Research Notes, 1955, Book 1. [sic]

A series of derivatives of pyridine and pyrimidine was synthesized, starting from an idea, proposed by L. F. Larionov, of forming anti-tumor preparations by linking di-2-chlorethylamino and ethyleneimino groups with natural heterocyclics, forming part of the composition of biologically important compounds (among them nucleic acids, coenzymes and vitamins). A marked action against interwoven tumors in rats and mice was shown by two of the chlorethylamino and one of the ethyleneimino derivatives of pyridine and by one of the chlorethylamino and two of the ethyleneimino derivatives of pyrimidine. The compounds 2, 6-dimethyl-3, 5-diethylene-iminomethyl-pyridine and 2, 6-diethylene-imino-4-methyl-pyrimidine not only retarded the growth of sarcoma 45, but also resolved it in 20 to 63% of the cases, respectively.

Pharmacology and Toxicology

REFERATIVNYY ZHURNAL. BIOLOGIYA (USSR) 1958, NO. 13 (Soviet Abstracts. Biology). 9 Sep 59, 52p. JPRS: 1890-N.
Order from OTS $1.00 59-13876

Contents:
Section V. Pharmacology and Toxicology. Abstracts 61287-61602.

Complete translations of those entries which were originally published in the Sino-Soviet bloc and in Yugoslavia.

COMPARISON OF THE ACTION OF PENTOTHAL AND KEMITHAL ON THE EXCITATION OF THE RESPIRATORY CENTER BY CARBON DIOXIDE [AND] USE OF DI-SUBSTITUTED UREA (1064 Th) FOR CORRECTING RESPIRATORY DEPRESSIONS THAT OCCUR DURING EXPERIMENTAL NARCOSIS WITH BARBITURATES (Action Comparée du Pentothal et du Kemithal sur l'Excitabilité du Centre Respiratoire par le Gaz Carbonique [and] Correction par une Uree Disubstituee (1064 Th) de la Depression Respiratoire au Cours de la Narcose Expérimentale par les Barbituriques). [1959] [6]p. (8 figs. omitted) 4 refs.
Order from SLA mi$1.80, ph$1.80 59-17141

Trans. of Societé de Biologie [et de ses Filiales] Comptes Rendus des Séances (France) 1952, v. 146, no. 13/14, p. 1121-1124 [and] Archives Internationles de Pharmacodynamie et de Thérapie (Belgium) 1952 [v. 91] no. 3/4, p. 404-411.

Braun, O. and Weber, G.
ON THE VASOTROPHIC EFFECT OF HYALURONIDASE AND ITS INFLUENCE ON THE PERMEABILITY OF THE VESSELS. [1959] [7]p. (2 figs. omitted).
Order from SLA mi$1.80, ph$1.80 59-17881

Trans. of unidentified German mono.

Brun, R. and Manuila, L.
EXPERIMENTS ON PERSPIRATION (Experiences sur la Transpiration). 26 Feb 54 [5]p. (5 figs. omitted) 6 refs.
Order from SLA mi$1.80, ph$1.80 59-17864

Trans. of Dermatologica (Switzerland) 1952, v. 104 [no. 4/5] p. 267-272.

Casirola, G. and Meduri, D.
STUDIES ON THE DIURETIC AND SALURETIC ACTIVITY OF HYDROCHLOROTHIAZIDE. PRELIMINARY CLINICAL STUDY (Ricerche sull'Attività Diuretica e Saluretica dell'Idroclorotiazide. Studio Clinico Preliminare). [1959] 20p. 8 refs.
Order from SLA mi$2.40, ph$3.30 59-17592

Trans. of Minerva Medica (Italy) 1959, v. 50 [no. 42] p. 1608-1613.

Domagk, G.
ON A NEW CLASS OF COMPOUNDS WHICH ARE EFFECTIVE IN VITRO AGAINST TUBERCLE BACILLI. [1959] [5]p. 23 refs.
Order from SLA mi$1.80, ph$1.80 59-17831

Trans. of unidentified German mono.

Doyen, Eugene-Louis.
SELF-PROPELLING AMPOULE FOR HYPERDERMIC [SIC] INJECTIONS. [1959] [4]p. (6 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-17832

Trans. of French patent 399,313 [gr.] XIX [cl.] 2, appl. 10 Feb 1909, issued 17 Apr 09, pub. 26 June 09.

Gol'ber, L. M.
EXPERIMENTAL CLINICAL STUDY OF NEW THERAPEUTIC PREPARATIONS SYNTHESIZED IN THE ACADEMY OF SCIENCES LATVIAN SSR.
10 Mar 59, 11p. JPRS: L-674-N.
Order from OTS $0.50 59-13253

Trans. of Sovetskaya Meditsina (USSR) 1958 [v. 22] no. 10, p. 153-158.

Helmreich, Ernst.
EXPERIMENTAL ANIMAL INVESTIGATIONS OF HYPOGLYCEMIC [Sic] A SUBSTANCE PREPARED FROM ASPERGILLUS NIGER THAT IS EFFECTIVE ORALLY. [1959] [4]p. (1 fig. omitted) 9 refs.
Order from SLA mi$1.80, ph$1.80 59-17825

Trans. of [Klinische Wochenschrift (Germany) 1951, v. 29, no. 21/22, p. 375-377].

A hypoglycemic substance derived from cultures of Aspergillus niger is described. Experiments on alloxan-diabetic rats, to which the preparation was administered intraperitoneally as well as orally, indicate that glycosuria and polyuria can be markedly reduced by its use. Tolerance for the agent is high, even for large dosages. No harmful after-effects were observed after administration for periods of weeks, with subsequent observation for 6 months.

Isler, O., Ronco, A. and others.
THE ESTERS AND ETHERS OF SYNTHETIC VITAMIN A. Jan 59, 18p. (4 tables, 1 fig, 1 illus. omitted) 19 refs. NP-tr-257.
Order from SLA mi$2.40, ph$3.30 59-17609

Partial trans. (p. 489-498) of Helvetica Chimica Acta (Switzerland) 1949, v. 32 [no. 2] p. 489-[505].

Isler, O., Huber, W. and others.
SYNTHESIS OF VITAMIN A. Jan 59, 32p. (5 figs. 1 illus. omitted) 40 refs. NP-tr-256.
Order from SLA mi$3.00, ph$6.30 59-17610

Manuscript trans. of Helvetica Chimica Acta (Switzerland) 1947, v. 30, no. 6, p. 1911-1927.

Ivanov, M. M. and Rebenkova, M. V.
ADOPTION OF PRODUCTION OF DRY BRUCELLA VACCINE FROM STRAIN NO. 19 (Osvoeniye Proizvodstva Sukhoy Brutselleznoy Vaktsiny iz Shtamma no. 19) 8 Apr 59, 10p. Trans. V1402.
Order from LC or SLA mi$1.80, ph$1.80 59-16147

Trans. of Gosudarstvennyy Nauchno-kontrol'nyy Institut Veterinarnykh Preparatov. Trudy (USSR) 1957, v. 7, p. 20-25.

Janowitz, Herbert C.
MODERN DEODORANTS AND ANTIPERSPIRANTS (Moderne Desodovisierunge- und Antischweissmittel). 29 Nov 54 [7]p. 4 refs.
Order from SLA mi$1.80, ph$1.80 59-17842

Trans. of Seifen-Ole-Fette-Wachse (West Germany) 1954, v. 80, no. 7, p. 158-159.

Kir'yalov, N. P., Litvinov, M. N. and others.
GALBANIC ACID AND ITS DERIVATIVES AS NEW ANTIBIOTICS OF PLANT ORIGIN (Gal'banovaya Kislota i yeye Proyzvodnyye kak Novyye Antibiotiky Rastitel'nogo Proyskhozhdeniya). [1959] 7p. 1 ref. Trans. A-1034.
Order from LC or SLA mi$1.80, ph$1.80 59-16826

Trans. of Botanicheskiy Zhurnal (USSR) 1959, v. 44, no. 1, p. 101-104.

Kolesov, S. G.
METHODS OF OBTAINING ANTI-ANTHRAX VACCINES (Metody Polucheniya Vaktsin Protiv Sibirskoy Yazvy). 13 Apr 59, 28p. (3 figs. omitted) 11 refs. Trans. V1410.
Order from LC or SLA mi$2.70, ph$4.80 59-16149

Trans. of Gosudarstvennyy Nauchno-kontrol'nyy Institut Veterinarnykh Preparatov. Trudy (USSR) 1957, v. 7, p. 177-193.

Manuila, L.
LOCAL MEDICINAL TREATMENT OF AXILLARY PERSPIRATION (Traitement Medicamenteux Local de la Transpiration Axillaire). 23 Feb 54 [5]p. (2 figs. omitted) 1 ref.
Order from SLA mi$1.80, ph$1.80 59-17862

Trans. of Dermatologica (Switzerland) 1950, v. 100 [no. 4/6] p. 304-309.

A test for the evaluation of anti-perspiration preparations is described. The substances tested were "a well known commercial product" and "a home made product."

Manuila, L. and Isler, H.
A NEW TEST OF PERSPIRATION (Nouveau Test de Transpiration). [1959] [5]p. (4 figs. omitted).
Order from SLA mi$1.80, ph$1.80 59-17863

Trans. of Dermatologica (Switzerland) 1951, v. 102, [no. 4/6] p. 302-306.

A description of the test method is included in the abstract of 59-17865 below.

Manuila, L.
PHARMACODYNAMIC EFFECT OF SOME SUBSTANCES ON THE SUDORIPAROUS GLAND (Effect Pharmacodynamique de Quelques Substances sur la Glande Sudoripare). [1959] [6]p. (1 fig. omitted) 10 refs.
Order from SLA mi$1.80, ph$1.80 59-17865

Trans. of Schweizerische Medizinische Wochenschrift, 1952, v. 82, no. 5, p. 104-106.

The stimulating or inhibiting effect of various substances upon the sweat glands was tested by means of an anhydrous adhesive applied to the skin: the potassium ferrocyanide and ferric sultate on the adhesive react to form prussian blue in the presence of water. The reaction is described as extremely sensitive. Substances tested include pilocarpine, acetylcholine, epinephrine, atropine, morphine, hyaluronidase, histamine and procaine. Epinephrine induced local perspiration in the great majority of cases.

Mascherpa, P.
SOME FEATURES OF A COBALT COMPOUND PREPARED SYNTHETICALLY AND POSSESSING THE ACTIVITY OF VITAMIN B_{12} (Alcune Caratteristiche di un Composto di Cobalto Ottenuto per Sintesi, Avente Attivita' Vitaminica B_{12}). [1959] [4]p.
Order from SLA mi$1.80, ph$1.80 59-17854

Trans. of Società Italiana di Biologia Sperimentale. Bolletino, 1953, v. 29 [no. 7] p. 1511-1514.

Roux, Marcel, Jacquet, Georges, and Huguenard, Pierre.
DELAYED ANESTHESIA WITH PENTOTHAL-SUBTOSAN. [1959] [23]p. (5 figs. omitted).
Order from SLA mi$2.70, ph$4.80 59-17828

Trans. of [la Presse Medicale (France) 1947, v. 55, p. 778-779].

Siegrist, Hella.
CALCIUM GLUCONATE SOLUTIONS FOR INJECTIONS, WITH ADDED CALCIUM AEVULINATE, RESPECTIVELY, CALCIUM-d-SACCHARATE. [1959] 20p. (figs. omitted) 15 refs.
Order from SLA mi$2.40, ph$3.30 59-17818

Trans. of Pharmaceutica Acta Helvetiae (Switzerland) 1949, v. 24 [no. 12] p. 430-443.

Sulser, F., Kunz, H. A. and others.
ANTAGONISTIC EFFECT BETWEEN CARDIAC GLYCOSIDES AND CORTICOSTEROIDS ON THE EXCRETION OF ELECTROLYTES BY THE KIDNEYS (Zur Frage einer Antagonistischen Wirkung zwischen Herzglykosiden und Corticosteroiden auf die Elektrolytausscheidung der Niere). [1959] 16p. 58 refs.
Order from SLA mi$2.40, ph$3.30 59-17597

Trans. of Naunyn-Schmiedeberg's Arch[iv für] Exp[erimentelle] Path[ologie] u[nd] Pharmak[ologie] (Germany) 1959, v. 235 [no. 5] p. 400-411.

Trenina, G. A., Gauze, G. F. and others.
ANTIVIRUBIN - ANTIVIRUS ANTIBIOTIC PRODUCED BY ACTINOMYCES LONGISPORUS RUBER (Antivirubin - Protivovirusnyy Antibiotik Obrazuyemyy Actinomyces Longisporus Ruber). [1959] 9p. 1 ref. Trans. A-995.
Order from LC or SLA mi$1.80, ph$1.80 59-16795

Trans. of Antibiotiki (USSR) 1956, v. 1, no. 4, p. 9-13.

Turchetti, Aldo.
DIURETIC ACTION OF 2, 4-DIAMINO-TRIAZINE. [1959] [13]p. 2 refs.
Order from SLA mi$2.40, ph$3.30 59-17835

Trans. of Riforma Medica (Italy) 1950, v. 64, no. 15, p. 405-408.

Unna, Klaus.
PHARMACOLOGICAL INVESTIGATIONS OF NEW SYMPATOL DERIVATIVES. [1959] 42p. (18 figs. 2 tables omitted [formulae refs.]).
Order from SLA mi$3.30, ph$7.80 59-17817

Trans. of [Naunyn-Schmiedeberg's] Arch[iv für] Exper[imentelle] Path[ologie] u[nd] Pharmakol[ogie] (West Germany) 1951, v. 213 [no. 3/4] p. 207-234.

Radiobiology

Balke, S.
LA PROTECTION CONTRE LES RADIATIONS EN TANT QUE SÉCURITÉ DU TRAVAIL, tr. by Klersy. 9 Apr 59 [13]p. Trans. no. A 564 (text in French).
Order from SLA mi$2. 40, ph$3. 30 CEA-tr-A564

Trans. in French of Atomvirtschaft (West Germany) 1958 [v. 3] p. 189-191.

This general discussion includes the comment that security will not be achieved if the psychic factors which determine man's behavior in a dangerous environment are not taken into account, Reference is made to the projected radiation safety law for the Federal Republic, and to difficulties inherent in the decree in force for Bavaria, which entails a juxtaposition of 2 authorities, one for labor safety, one for radiation protection per se.

Reiss, Karl H.
THE PHYSICAL LIMITS OF THE ELIMINATION OF SCATTERED X-RAYS WITH THE BUCKY GRID. [1959] 11p. 9 refs.
Order from SLA mi$2. 40, ph$3. 30 59-20015

Trans. of Z[eitschrift für] Angew[andte] Phys[ik] (West Germany) 1959, v. 11, no. 5, p. 184-188.

The effectiveness of scattered radiation grids, in the range of medical diagnostics, can be determined numerically. The technique for measuring the effectiveness, using a normal phantom, is described. A general geometrical theory permits the calculation of the maximum selectivity. Practical grids do not attain the maximum theoretical selectivity because of technological imperfections. Also, for high kilovoltage radiography, K fluorescence radiation from the absorbing laminae limits the efficiency of scatter removal. A rule for optimum dimensions for grids is given. (Author)

Venitskovskiy-Zolotykh, Yu. V.
SOME DATA ON THE EFFECT OF IRRADIATION ON HEMOPOIESIS IN SPLENECTOMIZED RATS (Nekotorve Dannye o Deystvii Oblucheniya na Krovotvoreniye Splenectomirovannykh Krys) tr. by Tatiana Boldyreff. 24 July 59, 16p. (1 fig. omitted).
Order from LC or SLA mi$2. 40, ph$3. 30 59-18491

Trans. of [Meditsinskaya Radiologiya] (USSR) 1958, v. 3, no. 5, p. 58-64.

Surgery

Froewis, J., Kremer, H., and d'Alberto, Th.
MORE THAN 1000 HYSTERECTOMIES WITH SPECIAL REFERENCE TO THE PATHOGENESIS OF DESCENSUS AND [INCONTINENCE] AFTER HYSTERECTOMY (Bericht über mehr als 1000 Uterusextirpationen unter Besonderer Berücksichtigung von Descensus- und Inkontinenzgenese nach der Uterusentfernung). Aug 59, 3p.
Order from SLA mi$1. 80, ph$1. 80 59-17667

Trans. of Wiener Klinische Wochenschrift (Austria) 1959, v. 71 [no. 1] p. 1-3.

Schmid, H. H.
RECONSTRUCTION OF THE VAGINA BY MEANS OF THE SIGMOID COLON (Scheidenbildung aus der Flexur). Aug 59 [4]p. (1 table omitted).
Order from SLA mi$1. 80, ph$1. 80 59-17666

Partial trans. of Zentralblatt für Chirurgie (East Germany) 1952, v. 77, no. 42a, p. 2119-2123.

Sinitsyn, N. P.
EXPERIMENTAL HEART TRANSPLANTATION (Peresadka Serdtsa v Eksperimente) tr. by H. M. Warfield. 27 July 59, 25p. (2 figs. omitted) 22 refs.
Order from LC or SLA mi$2. 70, ph$4. 80 59-18706

Trans. of Vestnik Khirurgii (USSR) 1956, v. 77, no. 7, p. 28-37.

Zoology

REFERATIVNYY ZHURNAL. BIOLOGIYA (USSR) 1958 (Soviet Abstracts. Biology).
Order from OTS $1. 00 each

Contents:
Section P. General and Specialized Zoology. Insects.

No. 10, Abstracts 44655-44908, JPRS: 1826-N, 59-13761
No. 11, Abstracts 49429-49700, JPRS: 1870-N, 59-13855
No. 16, Abstracts 73482-73735, JPRS: 1889-N, 59-13874

Complete translations of those entries which were originally published in the Sino-Soviet bloc and in Yugoslavia.

Popov, V. M. and Fedorov, Yu. V.
CHIPMUNK AS A HOST OF THE FOREST TICK AND A CARRIER OF THE VIRUS OF TICK-BORNE ENCEPHALITIS IN THE TOMSK INFECTION FOCUS (Burunduk kak Prokormitel' Lesnogo Kleshcha i Nositel' Virusa Kleshchevogo Entsefalita v Tomskom Ochage Infektsii). 17 Sep 59, 8p. Trans. V-1468.
Order from LC or SLA mi$1. 80, ph$1. 80 59-19676

Trans. of Nauchno-Issledovatel'skiy Institut Vaktsin i Syvorotok. Trudy, 1958, v. 9, p. 19-22.

Sugimoto, M.
NOTES ON THE TICKS IN THE FORMOSAN MOUNTAIN RESERVATION FOR THE ABORIGINES. [1959] [16]p. (refs. omitted) Trans. 11 (T11).
Order from SLA mi$2.40, ph$3.30 59-15896

Trans. of [Chuo Juikwai, Tokyo. Zasshi] (Japan) 1937, v. 50, p. 305-340.

CHEMISTRY

REFERATIVNYY ZHURNAL. KHIMIYA (USSR) 1959, NO. 9, Abstracts 30106-33737 (Soviet Abstracts. Chemistry). 25 Aug 59, 312p. JPRS: 1864-N.
Order from OTS $1.00 59-13849

Complete translations of those entries which were originally published in the Sino-Soviet bloc and in Yugoslavia, excluding the USSR.

Zvyagintsev, O. E.
THE MAIN ACHIEVEMENTS OF SOVIET INORGANIC CHEMISTRY IN 40 YEARS (Osnovnyye Dostizheniya Sovetskoy Neorganicheskoy Khimii za 40 let). July 59, [15]p. 14 refs. R. T. S. no. 1072
Order from LC or SLA mi$2.40, ph$3.30 59-18506

Trans. of Zhurnal Neorganicheskoy Khimii (USSR) 1957, V. 2, no. 10, p. 2281-2303.

Analytical Chemistry

PHYSICO-CHEMICAL METHODS OF EVALUATION FOR STREPTOMYCIN COLORIMETRY: COLLECTIVE REVIEW. [1959] [9]p. (15 refs. 1 diagr. omitted).
Order from SLA mi$1.80, ph$1.80 59-17820

Trans. of unidentified mono.

Chervet, J. and Pierrot, R.
CONTRIBUTIONS TO THE CHROMOTOGRAPHIC CONTACT PRINT METHOD, tr. by L. D. Muller. 1955 [18]p. (1 plate omitted) 15 refs. A. E. R. E. Lib/Trans. 576.
Order from SLA mi$2.40, ph$3.30 59-17441

Trans. of Societe Francaise de Mineralogie et de Cristallographie. Bulletin, 1954, v. 77, no. 1/3, p. 611-630.

The chromatographic contact print technique of Th. Hiller (Schweiz. mineral. petrog. Mitt. 17: 88, 1937) was used to determine Ni, Co, Cu, and Fe in Co and Ni ores and U in U ores.

Cremer, E[rika] and Roselius, L.
LA CHROMATOGRAPHIE EN PHASE GAZEUSE [Chromatography in Gaseous Phase] tr. by Berghaud. 5 Mar 59 [40]p. 91 refs. Trans. no. A 542 (text in French).
Order from SLA mi$3.00, ph$6.30 CEA-tr-A542

Trans. in French of Angew[andte] Chem[ie] (West Germany) 1958, v. 70, no. 2, p. 42-50.

The development of gas chromatography is surveyed. Recent experiments concerning the separation of oxygen and nitrogen are described, as well as those concerning absorption temperatures of rare gases on activated carbon, and the measurement of catalyzer surfaces. The bibliography is drawn largely from German or English language sources.

Erdey, L[adislaus] and Polos, L[adislaus].
DOSAGE DES IONS ZINC ET PLOMB PAR L'ACIDE ASCORBIQUE, tr. by Moreau. 3 Apr 59 [20]p. (1 fig. omitted) 63 refs. Trans. no. A 285 (text in French).
Order from SLA mi$2.40, ph$3.30 CEA-tr-A285

Trans. in French of Z[eitschrift für] Anal[ytische] Chem[ie] (West Germany) 1956, v. 153, no. 6, p. 401-411.

Farberov, M. I. and Speranskaya, V. A.
CONCENTRATION UNDER PRESSURE OF THE DELUTED SOLUTION OF FORMALDEHYDE (Kontsentrirovaniye Razbavlennykh Rastvorov Formal'degida pod Davleniyem). [1959] 7p. (3 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-14284

Trans. of *Zhurnal Prikladnoy Khimii (USSR) 1955, v. 28, p. 222-226.

Fischer, Roland, Hoelle, A., and Seidenberg, S.
PREDICTION OF THE BACTERICIDAL EFFECTS OF MATERIALS THROUGH THE DETERMINATION OF THEIR AFFINITY FOR WOOL. [1959] 20p. (1 table 4 figs. omitted) 5 refs.
Order from SLA mi$2.40, ph$3.30 59-17814

Trans. of Helvetica Chimica Acta (Switzerland) 1951, v. 34 [no. 1] p. 210-221.

Gagliardi, E. and Reimers, H.
DOSAGE COMPLEXOMETRIQUE DU SODIUM, DU POTASSIUM ET DE LEUR SOMME PAR ECHANGE IONIQUE, tr. by Isaac. 3 Dec 59 [12]p. 9 refs. Trans. no. A 544 (text in French).
Order from SLA mi$2.40, ph$3.30 CEA-tr-A544

Trans. in French of Z[eitschrift für] Analyt[ische] Chem[ie] (West Germany) 1958, v. 160, no. 1, p. 1-6.

By means of a magnesium ion exchanger, alkali metals are exchanged quantitatively and stoichiometrically against the magnesium so that complexometric determinations can be made with eriochrome black T as indicator. The procedure is characterized by a very great accuracy.

Goto, H. and Kakita, Y.
ANALYSE QUANTITATIVE DE L'ARSENIC ET DE L'ANTIMOINE EN QUANTITÉ FAIBLE DANS LE GERMANIUM ET L'OXYDE DE GERMANIUM, tr. by E. Hara. 17 Feb 59 [9]p. 8 refs. Trans. no. X 123 (text in French).
Order from SLA mi$1.80, ph$1.80 CEA-tr-X123

Trans. of [Nihon Kagaku Zasshi] (Japan) 1956, v. 77, p. 739-742.

Gottschalk, G. and Dehmel, P.
STATISTIQUE DANS L'ANALYSE CHIMIQUE. (II). L'ÉVALUATION DES ANALYSES PRATIQUES, tr. by Henry. 7 Feb 59 [14]p. (2 tables omitted) 2 refs. Trans. no. A 522 (text in French)
Order from SLA mi$2.40, ph$3.30 CEA-tr-A522

Trans. in French of Z[eitschrift für] Anal[ytische] Chem[ie] (West Germany) 1958, v. 160, no. 3, p. 161-169.

Huber, R. and Cruse, K.
MODE D'UTILISATION DES TITRIMETRES À HAUTE FRÉQUENCE AVEC CELLULES A POT, tr. by Moreau. 31 Mar 59[18]p. 11 refs. Trans. no. A561 (text in French).
Order from SLA mi$2.40, ph$3.30 CEA-tr-A561

Trans. in French of Z[eitschrift für] Phys[ikalische] Chem[ie, Frankfurt] (West Germany) 1957 [Neue Folge] v. 12, no. 5/6, p. 273-286.

Jakubovic, A. and Prochazka, Z.
DOSAGE DU SOUFRE ELÉMENTAIRE PAR CHROMATOGRAPHIE SUR PAPIER, tr. by Machourek. 22 May 59 [6]p. 4 refs. Trans. no. X 95 (text in French).
Order from SLA mi$1.80, ph$1.80 CEA-tr-X95

Trans. in French of Chem[icke] Listy (Czechoslavakia) 1956, v. 50, no. 12, p. 2029-2030.

Lautsch, W., Manecke, G., and Broser, W.
PRODUCTION AND APPLICATION OF ION EXCHANGER PAPER (Herstellung und Anwendung von Ionenaustauscher-Papier). [1959] [8]p. 24 refs. No. 250.
Order from SLA mi$1.80, ph$1.80 59-17904

Trans. of Zeitschrift für Naturforschung (West Germany) 1953, v. 8b, no. 5, p. 232-236.

Ionic groups are introduced into filter paper. With the filter paper thus obtained, separations of amino acids in the style of paper chromatography and paper electrophoresis are made, it developing that these papers in certain cases, under comparable conditions, make possible better separations than normal chromatography paper. (Author)

Mahr, C[arl] and Klamberg, H[orst].
SÉPARATION DE PRECIPITES PEU SOLUBLES, A PARTIR DE SOLUTIONS TRES DILUEES.
21 Apr 59 [30]p. 24 refs. Trans. no. A 569 (text in French).
Order from SLA mi$2.70, ph$4.80 CEA-tr-A569

Trans. in French of Arch[iv fur das] Eisenhutten-[wesen] (West Germany) 1957, v. 28, no. 12, .p. 795-800.

A method derived from paper chromatography, with use of a circular filter, permits the separation of slightly soluble precipitates from strongly diluted solutions. This method of "point flocculation" is based on the hypothesis that precipitation is impeded as a result of the formation of sols, and that the electric charge of the capillaries of the paper provokes flocculation. Results obtained by means of an apparatus devised for this operation are reported for receovery of iron, nickel, cobalt, lead and cadmium precipitates.

Mecke, R. and Rosswog, K.
CONTRÔLE DE LA PURETÉ DU BENZENE A L'AIDE DE MESURES DES CONSTANTES DIELECTRIQUES ET DE L'ABSORPTION DANS L'INFRAROUGE, tr. by P. Monnard. 21 Feb 59 [15]p. 14 refs. Trans. no. A 532 (text in French).
Order from SLA mi$2.40, ph$3.30 CEA-tr-A532

Trans. in French of Angew[andte] Chem[ie] (West Germany) 1954, v. 66 [no. 3] p. 75-78.

The determination of purity of benzene by the use of dielectric constants is compared to similar measurements by other means. The method of dielectric constants is inferior to cryoscopy (the latter is a long and complex method). Infrared spectroscopy is preferred.

Morozova, A. I. and Firsova, G. N.
SOLUBILITY OF CALCIUM SULFATE IN MIXES OF SALTS, GENERALLY OCCURRING IN NATURAL WATERS. [1959] [16]p. 10 refs.
Order from LC or SLA mi$2.40, ph$3.30 59-17637

Trans. of [Politekhnicheskiy Institut, Novocherkassk. Nauchnyye Trudy] (USSR) 1956, v. 27, no. 41, p. 151-165.

The solubility of calcium sulfate at 25°C was studied in solutions of various salts usually contained in natural waters (sodium chloride, calcium chloride, magnesium chloride, sodium sulfate and magnesium sulfate). Graphs show relation of solubility of calcium sulfate to content of various salts in the solution. It is shown that the solubility of calcium sulfate increases with increasing concentration of sodium chloride and magnesium chloride, and decreases with increasing concentration of sodium sulfate and calcium chloride. The effect of the latter salt is particularly pronounced. Activity coefficients are given, which are not available in literature, for calcium sulfate in solutions of sodium chloride and sodium sulfate. (Author)

Nagai, H.
CHROMATOGRAPHIE SUR PAPIER PAR PRÉCIPITATION DE CATIONS INORGANIQUES PAR L'EMPLOI DE L'OXINE (II), tr. by Sen Sik Minn. 2 Feb 59 [9]p. 2 refs. Trans. no. X 48 (text in French).
Order from SLA mi$1.80, ph$1.80 CEA-tr-X48

Trans. in French of [Nihon Kagaku Zasshi] (Japan) 1956, v. 77, no. 8, p. 1267-1270.

In precipitation chromatography using filter paper impregnated with quinolinol, it is possible, by control of the pH of the developing agent, to separate the ions of Cu, Fe, Ni, and Co, with white regions between the last three zones. No white region is observable between Cu and Fe: these two ions have a tendency to mix. Among the developing agents tested, a 2% solution of acetic acid saturated in n-butanol gave the best results.

Nakano, S[hoichi] and [Shimada, Sadako].
SEPARATION SIMULTANÉE DES ÉLÉMENTS ALCALINS ET ALCALINO-TERREUX PAR CHROMATOGRAPHIE SUR PAPIER, tr. by E. Hara, 2 Feb 59 [7]p. 12 refs. Trans. no. X 121 (text in French).
Order from SLA mi$1.80, ph$1.80 CEA-tr-X121

Trans. in French of [Nihon Kagaku Zasshi] (Japan) 1956, v. 77, no. 6, p. 836-839.

Nieter, H. G.
CUVE A ÉLECTROLYSE POUR DES ANALYSES POLAROGRAPHIQUES EN SÉRIE, tr. by P. Monnard. 9 Apr 59 [4]p. Trans. no. A 349 (text in French)
Order from SLA mi$1.80, ph$1.80 CEA-tr-A349

Trans. in French of Chem[ische] Techn[ik] (East Germany) 1956, v. 8, no. 2, p. 80.

Oelschläger, W.
DÉTERMINATION COLORIMETRIQUE DE PETITES QUANTITÉS D'ALUMINIUM AVEC "ALIZARIN S" DANS LES MATERIAUX BIOLOGIQUES ET AUTRES, tr. by Klersy. 18 Apr 59 [16]p. Trans. no. A 384 (text in French).
Order from SLA mi$2.40, ph$3.30 CEA-tr-A384

Trans. in French of Z[eitschrift für] Anal[ytische] Chem[ie] (West Germany) 1957, v. 154, no. 5, p. 321-328.

Radmacher, W. and Hoverath, A.
THE DIRECT OXYGEN DETERMINATION AND ITS USE IN FUEL ANALYSIS. [1959] 20p. 14 refs.
Order from SLA mi$2.40, ph$3.30 59-17649

Trans. of Brennstoff-Chemie (West Germany) 1959, v. 40 [no. 4] p. 97-104.

We applied to hard coals the method for determining the oxygen content of organic substances, developed by us on the basis of the Schütze-Unterzaucher method (Z. anal. Chem. 118: 245-258, 1939; Ber. deut. chem. Ges. 73: 391-404, 1939). In order to eliminate the disturbing effect of the minerals, we chose the way of demineralizing the hard coal according to the Radmacher-Mohrhauer method. The method permits, also, a comparatively simple determination of the water of hydration of the silicatic minerals of the coal. We investigated a fairly large number of Ruhr coals, according to this method of direct oxygen determination, and determined the capacity for oxygen absorption of coals of different degress of coalification. We furthermore determined the variations of the coal properties in oxidized coals. The investigations extended to the volatile-matter content of the coal, its capacity for absorption of moisture, its heating value, as well as its coking and caking properties. The effect of ammonia in arresting oxidation was demonstrated on the basis of a few examples. (Author's summary)

Tichomirova, V[era] and Simackova, O[lga].
DOSAGE DU CALCIUM EN PRESENCE D'UNE GRANDE QUANTITÉ DE MAGNESIUM, tr. by Machourek. 25 May 59 [10]p. 9 refs. Trans. X 93 (text in French).
Order from SLA mi$1.80, ph$1.80 CEA-tr-X93

Trans. in French of Chem[icke] Listy (Czechoslavakia) 1956, v. 50, no. 12, p. 1925-1927.

Organic Chemistry

ETHYLENE POLYMERIZATION PROCESS. 15 Apr 59, 20p. 1 ref.
Order from LC or SLA mi$2.40, ph$3.30 59-16176

Trans. of French patent 1,132,506, gr. 14, cl. 8, appl. 8 June 55, granted 5 Nov 56, pub. 12 Mar 57, appl. in Germany 9 June and 29 Sep 54, by Farbenfabriken Bayer A. G., Germany.

The process is characterized in that the polymerization is carried out in an atmosphere containing no water and in the presence of activate titanium or zirconium or of titanium and/or zirconium compounds in which the valences of said metals are lower than 3.

Baganz, H.
THE CHEMISTRY OF THE DI-ALPHA-HALOGEN ETHERS. [1959] 19p. 62 refs.
Order from SLA mi$2.40, ph$3.30 59-17497

Trans. of Angew[andte] Chem[ie] (West Germany) 1959, v. 71, no. 11, p. 366-371.

Methods for the preparation of the 1, 2-dihalo-1, 2-dialkoxy-ethanes are described. These compounds were caused to react with amines, cyanides, and pyridine; they are able to undergo cyclizing reactions. The 1, 2-dihalo-1, 2-dialkoxy-ethanes and the reaction products formed therefrom by dehalogenation and halogenation were subjected to pyrolysis, hydrolysis, and alcoholysis. The reaction of 1, 1, 2, 2-tetrachloro-1, 2-dialkoxy-ethanes with sodium alcoholate furnishes ortho-oxalic-hexa-alkyl ester. (Author's abstract)

Balandin, A. A. and Khidekel, M. L.
THE STRUCTURE OF MOLECULES AND THE KINETICS OF THEIR CATALYTIC HYDROGENATION [1959] 11p. 26 refs.
Order from LC or SLA mi$2. 40, ph$3. 30 59-17437

Trans. of Akad[emiya] Nauk [SSSR]. Doklady, 1958, v. 123, no. 1, p. 83-86.

In order to determine the influence of the conjugation energy (δ) on the hydrogenation velocity (v), the kinetics of hydrogenation were examined over Rh (0. 08 to 2. 5%) on Al_2O_3 catalyst at 5 to 60°C for: C_6H_6, pyridine, furan, 1, 3- and 1, 4-cyclohexadienes, 3, 4-dihydrofuran, ferrocene, ethylcyclopropane, eugenol, cis- and trans-isoeugenols, cyclopentadiene, cyclopentene, ethylbenzene, cumene, p-cymene, mesitylene, durene, B_2OH, $EtOB_2$, biphenyl, and 2-methylpyrrole. The order of reaction, determined by the change of concentration within wide limits, was zero. The velocity changed in proportion to the quantity of catalyst. Tabulated results indicate that: (1) Increased δ of the substrate lowers the reaction rate constant; (2) a phenol group activates the cyclopropane ring; (3) substituents on a ring produce effects that are explained by the inductive and hyperconjugational effects; (4) temperature variations destroy the relation of conjugational effects with reaction rate only in compounds whose δ values are close; (5) similar disturbances also take place after severe chemical changes of bonding; (6) the effect of solvents is generally too small to alter the effect of δ ; and (7) δ does not influence the energy of activation of hydrogenation. Most of the kinetic results are described by $\log (k_1/k_2) = a(\delta_2 - \delta_1) + b$, where k_1 and k_2 are observed reaction rate constants, δ_1 and δ_2 are the conjugation energies of the 2 compounds, and a and b are constants.

Bogoslovskaya, T. M., Drizo, E. A., and Ben'kovskiy, V. G.
THE INFLUENCE OF OXYGEN ON THE PHYSICO-CHEMICAL PROPERTIES OF BITUMEN AND BITUMINOUS MASTICS (Vliyaniye Kisloroda na Fiziko-khimicheskiye Svoystva Bituma i Bitumnykh Mastik). July 59 [14]p. 7 refs. RTS no. 1168.
Order from LC or SLA mi$2. 40, $3. 30 59-18952

Trans. of Akademiya Nauk Kazakhskoy SSR [Alma-Ata] Institut Nefti. Trudy, 1958, v. 2, p. 93-99.

A study has been made of the effect of oxygen on some physico-chemical properties of bitumen and of bituminous mastics with kaolin and ground shells. It has been shown that oxidation of bitumen and of bituminous mastics leads to an increase of the solubility in water. It is probable that the oxidation of bitumen proceeds simultaneously in two ways: (a) the oxidational breakdown of condensed and heterocyclic constituents with the formation of lower molecular weight more readily soluble substances; and oxidational condensation of constituents of the bitumen which leads to a reduction in the ability to swell in water. (Author's conclusions)

Bredereck, Hellmut, Gompper, Rudolf and others.
FORMAMID REACTIONS. XIV. REACTIONS OF ACID AMIDE ACYL HALIDE ADDUCTS; PREPARATION OF SUBSTITUTED AMIDINES AND AMIDRAZONES. [1959] [14]p. 15 refs.
Order from SLA mi$2. 40, ph$3. 30 59-17498

Trans. of Chem[ische] Ber[ichte] (West Germany) 1959, v. 92 [no. 4] p. 837-843.

The structure of the dimethylformamide phosphoroxychloride adduct, which is obtained in crystalline form, is discussed. N, N-disubstituted amides give N, N, N'-trisubstituted amidines with phosphoroxychloride and amines. The reaction of the dimethylformamide phosphoroxychloride adduct with hydrazines leads to the previously unknown formyl formamidazones. N, N'-disubstituted formamidines are produced through reaction of formanilides with alkylating agents. (Author's abstract)

Freundlich, W. and Claudel, B.
PREPARATION AND PROPERTIES OF MAGNESIUM HYDRIDE. [1959] 11p. 10 refs.
Order from LC or SLA mi$2. 40, ph$3. 30 AEC-tr-3551

Trans. of Société Chimique de France. Bull[etin] 1956, June, p. 967-970.

The quantitative study of the pyrolysis of diethylmagnesium and ethylmagnesium chloride verifies the two principal reactions:

$$Mg\ (C_2H_5)_2 \longrightarrow Mg\ H_2 + 2C_2H_4$$
$$2Mg\ C_2H_5X \longrightarrow MG\ H_2 + 2C_2H_4 + MgX.$$

The reactions start at about 175° but are not complete except in the temperature zone in which the hydride is dissociated. The pure MgH_2, thus obtained, is spontaneously inflammable in the air. It has the same crystalline structure - that of rutile - as the hydride formed by direct synthesis of the elements and which is stable in air. This difference of reactivity originates from a difference in granulometry. (Author's abstract)

Giacalone, A.
TRANSPOSITION OF ANILIDES. NOTE II. [1959] [4]p. 1 ref.
Order from SLA mi$1. 80, ph$1. 80 59-17837

Trans. of Gazzetta Chimica Italiana, 1933, v. 63, p. 761-763.

Heating formanilide with aniline and aniline chlorhydrate at 170°C in presence of a small amount of fused $ZnCl_2$, p-leuco aniline is obtained together with a small amount of another base, having a fusion point of 261°C, which was not further studied. Working under the same conditions, but using acetanilide and benzoyl aniline instead of formanilide, no transposition takes place, and aniline is formed instead. (Author's summary)

Gostunskaya, I. V., Rozhkova, M. I. and Kazanskiy, B. A.
REDUCTION OF MONO-OLEFINIC HYDROCARBONS WITH LIQUID AMMONIA SOLUTIONS OF THE ALKALI METALS. 22 Apr 58 [8]p. 16 refs. JPRS/DC-103.
Order from LC of SLA mi$1. 80, ph$1. 80 59-18370

Trans. of Akad[emiya] Nauk SSSR. Doklady, 1957, v. 114, no. 3, p. 545-548.

During the reduction of α-olefins by alkali metals in liquid ammonia solution with addition of alcohol, the yield of saturated hydrocarbons drops with the increase in the molecular weight of olefins. Olefins with β and γ positions of double bond were not reduced in test conditions. Of the 3 alkali metals used – Li, Na and K – the most active in the reaction of reduction proved to be Na. Substituting the less acid ethyl alcohol for methyl alcohol during reduction of olefins of C5 -C10 content, raised the yield of saturated hydrocarbons. (Author's conclusions)

Inagaki, Hiroshi and Takahashi [Hiromitsu].
STUDIES ON THE LIGHT SCATTERING OF HIGH POLYMER SOLUTION. II. RESULTS ON SPHERICAL PARTICLES. [1959] [9]p. (3 figs. omitted) 13 refs.
Order from SLA mi$1.80, ph$1.80 59-15916

Trans. of [Nihon Kagaku Zasshi (Japan) 1952, v. 73, p. 50-53].

The angular distribution of scattered light (especially the dissymmetry coefficient) was measured for diluted suspension of spheres of polystyrene, which was obtained by emulsion polymerization carried out in water using an emulsifier and a catalyst. At the same time, the size of the particles was measured by an electron microscope. (A part of this paper was presented before the fourth annual meeting of the chemical society of Japan)

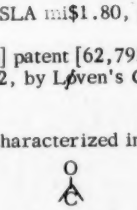
Joris, G. G.
CUMENE OXIDATION PROCESS. 7 Jan 59, 5p.
Order from LC or SLA mi$1.80, ph$1.80 59-12916

Trans. of Belgian patent 496,995, appl. 14 July 50, granted 31 July 50, pub. 3 Nov 50, appl. in U. S. 19 July 49, by Allied Chemical & Dye Corporation.

Kongsted, A.
PROCEDURE FOR THE PRODUCTION OF 4-OXY-PIPERIDIN-4-CARBONIC ACID-NITRILES. [1959] [3]p. 1 ref.
Order from LC or SLA mi$1.80, ph$1.80 59-17822

Trans. of [Swedish] patent [62,791] issued 2 Oct 44, term from 5 Aug 42, by Løven's Chemical Works, Copenhagen.

The procedure is characterized in that piperidons of the formula



in which R denotes hydrogen, an alkyl, aralkyl- or aryl group, are treated with cyanic hydrogen in an aqueous solution. The piperidone is dissolved in water and a strong acid (e. g., hydrochloric acid) is added, whereupon is added, under cooling, an aqueous solution of some alkaline cyanide.

Kreps, Robert Willem, De Wit, Willem Frederik, and Christiansen, Leif Helstrup.
PROCESS FOR TREATMENT OF POLYCYCLIC DIENE-COMPOUNDS IN ORDER TO IMPROVE SEVERAL OF THEIR PROPERTIES. [1959] 11p. 1 ref.
Order from LC or SLA mi$2.40, ph$3.30 59-20078

Trans. of Dutch patent 84715, appl. no. 192802, appl. date 30 Nov 54, laid open for pub. insp. 15 June 56, granted 27 Feb 57, issued 15 Mar 57, by N. V. De Bataafsche Petroleum Maatschappij.

According to the invention the hydrocarbon compounds should be washed at high temperature with an aqueous solution of acid. In general, 1% by weight can be also applied with very good results. Preparations of the biocidal compounds comprised become more stable as a result of being treated. This greater stability makes possible a longer storage period than has hitherto been commercially feasible. By means of the pre-treatment of the diene compounds the amount of oxidant can be reduced to less than one mol or the same amount can be used to obtain much higher yields as calculated from the polycyclic diene. The polycyclic diene compounds can be prepared for example by the reaction of a cyclopentadiene or a hexohalogencyclopentadiene with a hexahalogenpolycyclic dienophile or a polycyclic dieneyhile. The washing according to the invention can be carried out at any stage. Almost any of the organic or inorganic acids can be used for the washing.

Kuffner, Friedrich and Gruber, Wilhelm.
PERCENTAGE TABLES OF ORGANIC COMPOUNDS, tr. by E. L. 18 Dec 51 [4]p.
Order from SLA mi$1.80, ph$1.80 59-17815

Trans. of unidentified mono. from Chemical Lab. of Vienna U.

A system, approved in many years of use, of the arrangement of the percentages of organic compounds is described, allowing not only quick finding of calculated figures of a certain molecular formula, but allowing just as quickly the finding of molecular formula which agrees with figures which have been found.

Kuz'minskiy, A. S.
AGEING OF HIGH POLYMERS (Stareniye Vysokopolimerov). Mar 59 [60]p. 91 refs. C. T. S. no. 391.
Order from LC or SLA mi$3.60, ph$9.30 59-18529

Trans. of Uspekhi Khimii (USSR) 1955, v. 24, no. 7, p. 842-874.

Problems concerning thermal ageing, light ageing and fatigure ageing are discussed.

Letort, M[aurice] and Mathis, P[ierre].
FORMATION OF POLYACETALDEHYDE DIRECTLY FROM LIQUID MONOMER. [1959] 2p. (refs. omitted).
Order from SLA mi$1.80, ph$1.80 59-17563

Trans. of [Academie des Sciences, Paris]. Comptes Rendus (France) 1959, v. 249, no. 2, p. 274-276.

Using very reactive initiators (mineral acids) we have observed during the course of progressive refrigeration in the preparation that the polymer definitely formed above the crystallization temperature of the monomer; which fact we have never observed using an organic acid as initiator. About thirty systematic experiments have been made with BF_3 and $S_2O_8Am_2$. (Extracted from the report)

Monti, Lydia.
THE NITRATION OF PHENOLS WITH NITROUS VAPORS (Sulla Nitrazione dei Fenoli per Mezzo dei Vapori Nitrosi). [1959] [7]p. 12 refs.
Order from SLA mi$1.80, ph$1.80 59-17893

Trans. of Gazzetta Chimica Italiana, 1937, v. 67, p. 628-633.

Natta, G., Pino, P. and others.
STEREOSPECIFIC POLYMERIZATION OF ALPHA-OLEFINS. NOTE IV. POLYMERIZATION OF PROPYLENE WITH TITANIUM CHLORIDES AND VARIOUS ALUMINUM TRIALKYLS. [1959] [13]p. 15 refs.
Order from SLA mi$2.40, ph$3.30 59-17561

Trans. of Gazz[etta] Chim[ica] Ital[iana] 1958, v. 88 [no. 2] p. 219-228.

The polymerization of propylene with catalysts prepared from tri-and tetravalent titanium chlorides and aluminum trialkyls was studied. The study was specifically directed to the variations in polymerization velocity and stereoisomeric composition of the products with variation in the alkyl groups initially attached to the aluminum. Stereospecificity decreases with increase in the number of carbon atoms in the aluminum alkyls from aluminum triethyl to aluminum trioctyl. This is particularly noticeable with the catalysts obtained from $TiCl_3$. With catalysts from titanium tetrachloride the mol ratio of aluminum trialkyl to $TiCl_4$ used in their preparation also affected the polymerization velocity and stereospecificity. With all the aluminum alkyls studied maximum velocity was obtained at $AlR_3/RiCl_4 = 2$. This ratio also gives minimum stereospecificity and lowest intrinsic viscosity in the isotactic polymer produced. For all the aluminum trialkyls that we have studied, the highest stereospecificity is obtained by using $TiCl_3$, especially its violet crystalline modification, in preparing the catalyst. (Author's summary) (See also 59-15049, 59-18869)

Natta, Guilio, Porri, Lido, and Fiore, Leonardo.
STEREOSPECIFIC POLYMERIZATION OF CONJUGATED DIOLEFINS WITH CATALYSTS CONTAINING DIFFERENT LATTICE STRUCTURAL FORMS OF $TiCl_3$. [1959] 15p. 12 refs.
Order from SLA mi$2.40, ph$3.30 59-20016

Trans. of Gazzetta Chimica Italiana, 1959, v. 89, no. 3, p. 761-774.

Polymerization of conjugated diolefins by means of catalysts prepared from metallorganic compounds and $TiCl_3$ was studied. The latter is known in three different crystalline modifications, which have been designated α, β, and γ, respectively. The α and γ modifications are violet and have a laminar structure, while the β modification is maroon and has a fibrous structure. Catalysts consisting of aluminum alkyls and $TiCl_3$ show a different stereospecificity in polymerization of conjugated olefins, depending on the particular crystalline form of the $TiCl_3$ used. Catalysts with α and $TiCl_3$ base yield polymers of butadiene and isoprene composed predominantly of 1, 4 trans-stereoisomers, which are crystalline at room temperature. Catalysts with β $TiCl_3$ base yield polymers of isoprene with predominantly 1, 4-cis-structure of the type of natural rubber and polymers of butadiene which, depending on the aluminum alkyl used, are amorphous products composed of intramolecular mixtures of 1, 4-trans and 1, 4-cis units, or they are crystalline products composed of mechanical mixtures of 1, 4-trans and of stereoisomers predominantly 1, 4-cis. (Author)

Nesmeyanov, A. N., Lutsenko, N. F., and Tumanova, Z. M.
FROM THE FIELD OF THE MERCURY-ORGANIC COMPOUNDS, tr. by P. DePorte. Rept. 44 on Preparation of Monohalogenmercuriketones and Aldehydes through Enolacetates and Their C- and O-Alkylation and Acylation Reactions. 3 Sep 59, 14p. 10 refs.
Order from LC or SLA mi$2.40, ph$3.30 59-19213

Trans. of Akademiya Nauk SSSR. [Otdeleniye Khimicheskikh Nauk]. Izvestiya, 1949, no. 6, p. 601-606.

Paolini, I. de and Ribet, G.
ON THE BEHAVIOR OF BENZOYL PEROXIDE TOWARD THE AMINO COMPOUNDS (Sul Comportamento del Perossido di Benzoile verso gli Aminocomposti). [1959] [7]p. 11 refs.
Order from SLA mi$1.80, ph$1.80 59-17967

Trans. of Gazzetta Chimica Italiana, 1932, v. 62, p. 1041-1048.

It is shown that the peroxide of benzoyl $(C_6H_5CO)_2O_2$ reacts with the primary aliphatic amine according to the general reaction $C_6H_5CO.O.O.COC_6H_5 + RNH_2$ $C_6H_5CO.O.OH + RNHCOC_6H_5$, while it transforms the tertiary aliphatic amine into the corresponding secondary amine; and the behavior of the primary and secondary aliphatic amines toward peroxide of benzoyl is compared, proposing the use of this reagent for the differentiation of the two classes of substances. It is concluded that the peroxide of benzoyl can act as an oxidant of the aromatic amines in anhydrous solvents, functioning as acceptors of hydrogen, either of amines or of hydrocarbons; and that the chromatic reaction between the said peroxide and the aromatic amines is particularly sensitive in the case of the mixed amine of the type of dimethyl aniline. (Author's summary)

Pasquon, I., Dente, M., and Narduzzi, F.
THE KINETICS OF POLYMERIZATION WITH THE CATALYTIC SYSTEM VANADIUM OXYCHLORIDE AND ALUMINUM. Note no. 2 on Coordinate Anionic Polymerization Propylene to Atactic and Stereoblock Polymers of High Molecular Weight. [1959] [25]p. 18 refs.
Order from SLA mi$2.70, ph$4.80 59-20081

Trans. of [1a] Chim[ica] e [1']Ind[ustria] (Italy) 1959, v. 41, no. 5, p. 387-397.

A study was made of the kinetics of the polymerization of propylene with a catalytic system, which, in contrast to other more stereospecific systems already studied, furnish atactic and stereoblock polymers of extremely high molecular weight. The speed of the polymerization process, using the catalytic system under examination, is in large part determined by the process of olefin diffusion, which is slow near the surface of the catalyst. This fact has been attributed to a continuous accumulation of the polymer around each catalyst granule. The polymerization rate is of the first order with respect to both the catalyst concentration and the concentration of the olefin on the catalyst-solution interface. The apparent activation energy of the overall polymerization process, determined from the initial velocity values, proved to be equal to about 2800/cal/mol. (Author) (See also 59-17205)

Sakashita, K[iyoshi].
ETUDES DES DERIVES DU CYCLOHEXANE AU POINT DE VUE DE LA CHIMIE STRUCTURALE (3EME RAPPORT). SPECTRE D'ABSORPTION PAR LE 4,5 - DICHLORCYCLOHEXANE -(1) DANS LA REGION DES RAYONS INFRA-ROUGES, tr. by E. Hara. 27 Mar 59 [24]p. 6 refs. Trans. no. X 177 (text in French).
Order from SLA mi$2.70, ph$4.80 CEA-tr-X177

Trans. in French of [Nihon Kagaku Zasshi] (Japan) 1958, v. 79, p. 329ff.

Spryskov, A. A.
THE STUDY OF THE REACTION OF SULFONATION. II. THE INFLUENCE OF TIME AND EXCESS OR SULFONATED SUBSTANCE UPON THE PROCESS OF THE REACTION. [1959] [15]p. (3 figs. [Eng. summary] omitted) 9 refs.
Order from LC or SLA mi$2.40, ph$3.30 59-17827

Trans. of [Zhurnal Obshchey Khimii] (USSR) 1944, v. 14, no. 7/8, p. 833-841.

The mechanism of monosulfonation previously suggested has been proved by numerous experiments. The increase in the excess of non-solubles in sulfuric acid sulfonated agent slows down the process of sulfonation; therefore, upon increase in sulfonated substance, we have an initial decrease and subsequent increase in the concentration of the used acid, at the same duration of the reaction. After 30-hr sulfonation of an equimolecular quantity of naphthalene with 100% sulfuric acid at 162°C a condition close to equilibrium was attained. The equilibrium is reached when the concentration of the used sulfuric acid in the mixture attains a level of approximately 40%. Very long intervals of time are necessary in order to reach the state near equilibrium, under the conditions of low temperature as well as of great excess of sulfonated substance. The concentration of the used acid in the sulfonation mixture depends upon sulfonated substance, temperature, as well as upon the concentration of sulfuric acid, quantity of the excess of sulfonated agent and the length of the reaction. (Author) (See also 59-15376)

Yamaguchi, Masaru.
ON SOME DERIVATIVES OF SALICYLAMINE. [1959] [6]p. 3 refs.
Order from SLA mi$1.80, ph$1.80 59-17869

Trans. of [Nihon Kagaku Zasshi (Japan) 1952, v. 73, p. 393-394].

Yamashita, Yu[y]a and Shimamura, Tsuneo.
CATALYTIC EFFECTS OF THE TRIAMINES IN THE SALT-ELIMINATING ESTERIFICATION REACTION, tr. by Carl Demrick. [1959] [25]p. 15 refs.
Order from SLA mi$2.70, ph$4.80 59-20103

Trans. of Kogyo Kagaku Zasshi (Japan) 1957, v. 60, no. 4 [p. 423-426].

In the salt-elimination esterification reaction of halogenated alkyls and carbonic acid sodium salts (sodium carbonates), the third-class (tri-) amine catalysts have remarkable effects. With regard to their mechanism, it is considered that a substitution of the Hofmann decomposition type takes place speedily following the speed-controlling stage for the formation of the fourth-class ammonium salts. Triethylansine, triethylphosphine and so forth are catalysts which are even superior to the third-class (tri-) amines. Furthermore, sodium iodide further accelerates the catalytic reactions of these amines. The activity of the third-class (tri-) amines as catalysts is markedly obstructed by the presence of a small amount of water. In the complex decomposition reactions between halogenated alkyls and the various kinds of inorganic and organic sodium salts, the fact that the third-class (tri-) amines constitute effective catalysts has been confirmed by the use of pyridine as an example in the case of benzyl chloride, picryl chloride, cetyl chloride and sodium acetate, sodium cyanide, sodium iodide, sodium sulfite, and p-toluene-sulfonic acid sodium (sodium p-toluene sulfonate). (Author's conclusions) A lecture at the 9th annual meeting of the Chemical Society of Japan in April, 1956).

Physical Chemistry

Alekseyevskiy, E. V.
THE ADSORPTION OF MERCURY VAPOUR BY SOME ADSORBENTS AND CATALYSTS, tr. by J. B. Sykes. 1955 [9]p. A. E. R. E. Lib/Trans. 574.
Order from SLA mi$1.80, ph$1.80 59-17508

Trans. of All-Union Mendeleyev Congress (No. 6) on

Theoretical and Applied Chemistry, Khar'kov, 1932. Proceedings, v. 2, pt. 1, p. 245-249.

From a series of investigations of adsorbents, the most active for mercury vapour at room temperature has been found to be active manganese dioxide, which absorbed 41.5% of mercury in 5 years. Active manganese dioxide may be a specific adsorbent for the recovery of mercury vapour and to guard the organism from this vapour by the use of manganese dioxide in the respirator barrel. (Author)

Awa, N.
ÉTUDES DES RÉACTIONS ANODIQUES AU COURS DE LA GALVANOPLASTIE PAR LE CYANURE DE CUIVRE. I. CONSIDÉRATIONS SUR LES MODIFICATIONS DE LA SURFACE DE L'ANODE EN CUIVRE, tr. by E. Hara. 15 May 59 [17]p. (tables omitted) 4 refs. Trans. no. X 129 (text in French).
Order from SLA mi$2.40, ph$3.30 CEA-tr-X129

Trans. in French of [Nihon Kinzoku Gakkai-Shi] (Japan) 1955, v. 19, no. 4, p. 263-271.

Awa, N.
ETUDES DES REACTIONS ANODIQUES AU COURS DE LA GALVANOPLASTIE PAR LE CYANURE DE CUIVRE. II. MODIFICATIONS DE LA SURFACE DE L'ANODE ET PROPRIÉTÉS DE LA COUCHE PASSIVE, tr. by E. Hara. 15 May 59 [16]p. 2 refs. Trans. no. X 130 (text in French).
Order from SLA mi$2.40, ph$3.30 CEA-tr-X130

Partial trans. in French of [Nihon Kinzoku Gakkai-Shi] (Japan) 1955, v. 19, no. 4, p. 263-271.

See also 59-17633.

Bach, A.
THEORIES OF SPONTANEOUS OXIDATION. [1959] 7p. 19 refs. R. T. P. Trans. no. 2419.
Order from SLA mi$1.80, ph$1.80 59-17685

Partial trans. (p. 381-392) of Acta Physiochimica [U. R. S. S.] (USSR) 1938, v. 9, no. 3/4, p. 381-394.

A literature review, primarily based on German sources published before 1935.

Beattie, James A. and Edel, Walter L.
MEASUREMENTS WITH THE PISTON PRESSURE BALANCE. I. INFLUENCE OF PRESSURE UPON THE BALANCE CONSTANT. [1959] [10]p. (4 figs. omitted) 6 refs. Communication no. 265.
Order from SLA mi$1.80, ph$1.80 59-17999

Trans. of German mono. Über Messungen mit der Kolbendruckwaage. I. Der Einfluss des Druckes auf die Waagenkonstante.

Comparisons of the loads of two fixed-weight pressure balances with interconnected mercury U-tube and a mercury column of 800 cm. show, within the experimental accuracy, no variation of the piston constants, with the pressure. The pressure range was 60-540 atm. The general reproducibility of the determination of the equilibrium loads of the pistons was approximately 1-2 to 50 000; the mean error (with the exclusion of a series of experiments) for the determination of the piston constant was approximately 1 to 10 000. (Author) (See also 59-17996)

Beattie, James A. and Bridgeman, Oscar C.
MEASUREMENTS WITH THE PISTON PRESSURE BALANCE. II. INFLUENCE OF AGEING AND OIL VISCOSITY ON THE CONSTANT OF THE BALANCE; RELATION BETWEEN THE EFFECTIVE AND THE ACTUAL DIAMETER OF THE PISTON. [1959] [10]p. 11 refs. Communication no. 272.
Order from SLA mi$1.80, ph$1.80 59-17996

Trans. of German mono. Über Messungen mit der Kolbendruckwaage. II. Einfluss von Alterung und Ölviskosität auf die Waagenkonstante; Beziehung zwischen dem Wirksamen und dem Wirklichen Durchmesser des Kolbens.

See also 59-17999

Blumenfeld, L. A., Kalmanson, A. E. and Shei-Pei-gen.
PECULIARITIES OF ELECTRONIC STRUCTURE OF NUCLEIC ACIDS AND OF THEIR COMPLEXES WITH PROTEINS. [1959] [8]p. (7 refs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-18363

Trans. of Akademiya Nauk SSSR. Doklady, 1959, v. 124, no. 5, p. 1144-1146.

Boirie, Ch.
EXTRACTION OF URANYL SULFATE BY AMINES (Extraction du Sulfate d'Uranyle par les Amines) tr. by A. L. Monks. 2 Mar 59, 26p. 18 ref. (foreign text included).
Order from LC or SLA mi$2.70, ph$4.80 AEC-tr-3584

Trans. of Soc[iété] Chim[ique de] France. Bull[etin] 1958, no. 8/9, p. 1088-1093.

A study has been made of the extraction of uranyl sulfate by long chain amines and formulas are given for compounds formed with diverse amines in solution in carbon tetrachloride; the effect of various factors has been controlled. We have chosen di-n-decylamine to study the equilibrium of amine and uranyl sulfate and to determine its dissociation constant. (Author)

Buben, N. Ya. and Frank-Kamenetskiy, D. A.
ON ABSOLUTE RATES OF DISSOLVING. [1959] [16]p. 13 refs. AERE Lib/Trans. 473.
Order from SLA mi$2.40, ph$3.30 59-17322

Trans. of Zhurnal Fizicheskoy Khimii (USSR) 1946, v. 20, no. 3, p. 225-238.

The kinetics of the dissolving of copper in nitric acid and solutions of ferric chloride under the conditions of the "internal" problem, and of the dissolving of gypsum in water on stirring with an agitator were studied. The absolute values of the rates of dissolving

obtained compared favorably with those calculated according to the hydrodynamic theory of convection diffusion.

Bulatnikova, Yu. I., Apel'baum, L. O. and Temkin, M. I.
THE USE OF RADIOACTIVE SULFUR TO STUDY H_2S-POISONING OF AMMONIA-SYNTHESIS CATALYST (Izucheniye Otravleniya Katalozatora Sinteza Ammyaka Serovodorodom s Primeneniyem Radiosery). [1959] [13]p. 20 refs.
Order from LC or SLA mi$2.40, ph$3.30 59-18543

Trans. of Zhurnal Fizicheskoy Khimii (USSR) 1958, v. 32, no. 12, p. 2717-2724.

An investigation was made of H_2S-poisoning of ammonia-synthesis catalysts at atmospheric pressure in a flow-circulation system. The use of H_2S tagged with S^{35} permitted the use of radiochemical methods to determine small quantities of sulfur. The behavior of catalysts consisting of $Fe + Al_2O_3 + K_2O$, $Fe + Al_2O_3$, and $Fe + K_2O$ in H_2S poisoning differs substantially. In the absence of K_2O, complete poisoning requires a quantity of sulfur close to that which corresponds to a monoatomic layer. The introduction of K_2O makes the catalyst more stable to H_2S poisoning and gives it the capacity partially to regain its activity after poisoning when working with a pure nitrogen-hydrogen mixture through the formation of K_2S. In the case of catalyst composed of $Fe + K_2O$ we observed volatilization of considerable quantities of potassium. The growth of the FeS film on the catalyst composed of $Fe + Al_2O_3 + K_2O$ stops when the film reaches around 40 A in thickness. (Author)

Eckart, F.
NOISE MEASUREMENTS ON THIN LEAD SULPHIDE PHOTO LAYERS (Rauschmessungen an Dünnen Bleisulfid-Photoschichten). [1959] [5]p. 4 refs. No. 248.
Order from SLA mi$1.80, ph$1.80 59-17913

Trans. of Annalen der Physik (East Germany) 1952, 6 Folge, v. 11, no. 2/3, p. 166-168.

A report is made on noise measurements made on lead sulphide layers which were chemically prepared and subjected to an oxygen treatment. It develops that the absolute value of the noise inflow is proportional to the cell current and is independent of whether the electrons are detached thermically or photoelectrically. The dark current as well as the mean noise inflow are proportional to the field intensity. An estimate is made of the mean life periods of the charge carriers, using as a basis a mean mobility determined from Hall effect measurements. (Author)

Feitknecht, Walter.
THE SOLID HYDROXY SALTS OF BIVALENT METALS. 1956 [92]p. (3 formulae omitted) 150 refs. A. E. R. E. Lib/Trans. 622.
Order from SLA mi$5.40, ph$15.30 59-17538

Trans. of Fortschritte der Chemischen Forschung (Germany) 1953, v. 2 [no. 4] p. 670-757.

A literature review.

Gehlen, H. and Cermak, J.
DÉCOMPOSITION DU NITROSODISULFONATE DE POTASSIUM EN SOLUTION ALCALINE, tr. by B. Moreau. 3 June 59 [17]p. 13 refs. Trans. no. A 584 (text in French).
Order from SLA mi$2.40, ph$3.30 CEA-tr-A584

Trans. in French of Pädogogische Hochschule, Potsdam. Wiss[enschaftliche] Z[eitschrift] (East Germany) 1955, v. 1, no. 2, p. 117-120.

Gonikberg, M. G.
REGULAR SOLUTIONS OF GASES IN LIQUIDS. II. CONCENTRATED SOLUTIONS OF HYDROGEN AT HIGH PRESSURE, tr. by R. J. Richardson. 1955 [9]p. 15 refs. A. E. R. E. Lib/Trans. 557.
Order from SLA mi$1.80, ph$1.80 59-17477

Trans. of Acta Physicoch[i]mica [U. R. S. S.] (USSR) 1940, v. 12, no. 6, p. 921-930.

An equation was proposed which describes gas/non-polar liquid equilibrium at high concentrations and pressures. The applicability of this equation to solutions of hydrogen in liquid N_2, CO, CH_4 and C_2H_4 at high pressures and concentrations of the dissolved gas was shown. It was shown that under certain conditions, the values of the partial molar volumes of the dissolved hydrogen in the solvents investigated lie close to one another and to the molar volume of liquid hydrogen at $p = 1$ atm. It has been shown that the assumption about the independence of the partial molar volume from the concentration and the pressure for the system considered does not give rise to errors in excess of the experimental error. (Author's summary)

Goto, S[akichi].
DIFFÉRENTS PROBLEMS QUE POSENT LES RÉACTIONS DES POUDRES, tr. by Sen Sik Minn. 9 Feb 59 [9]p. 47 refs. Trans. no. X 70 (text in French).
Order from SLA $1.80, ph$1.80 CEA-tr-X70

Trans. in French of [Kogyo Kagaku Zasshi] (Japan) 1956, v. 59, no. 3, p. 284-288.

This article comprises a brief review of the state of knowledge of the physico-chemical properties of powders. The bibliography on which it is based is drawn from English-language, French or German sources.

Gunther, G. and Staude, H.
DÉTERMINATION DE LA CAPACITÉ DE SATURATION DES RESINES SYNTHÉTIQUES ÉCHANGEUSES D'IONS, tr. by B. Moreau. 21 Apr 59 [18]p. (3 tables omitted) 4 refs. Trans. no. A 330 (text in French).
Order from SLA mi$2.40, ph$3.30 CEA-tr-A330

Trans. in French of Z[eitschrift für] Phys[ikalische] Chem[ie, Leipzig] (East Germany) 1956, v. 206, no. 1/2, p. 124-138.

Gurevich, I. G.
CONTEMPORARY STATE OF THE DEVELOPMENT OF FUEL CELLS. [1959] 29p. 30 refs.
Order from LC or SLA mi$2.70, ph$4.80 59-17423

Trans. of Inzhener[no]-Fiz[icheskiy] Zhur[nal] (USSR) 1958, v. 1, no. 2, p. 75-88.

Haissinsky, M. and Lefort, M.
ROLE OF OXYGEN RADICALS IN OXIDATION AND THE REDUCTIONS PRODUCED BY IONIZING RADIATION. III. ARSENITE ARSENATE SYSTEM, tr. by A. L. Monks. 3 Feb 59, 19p. 17 refs.
Order from LC or SLA mi$2.40, ph$3.30 AEC-tr-3560

Trans. of Jour[nal] de Chimie Physique (France) 1951, v. 48, p. 429-437.

Arsenous ions in aqueous solutions are completely oxidized by α-rays of Rn; there is no inverse reaction observed. The x-rays result in a "radiochemical equilibrium" which is displaced in favor of the reduced state with an increase in acidity. The x-rays in a sufficiently concentrated solution of arsenite produce at the same time as oxidation, a partial precipitation of the As-element considered as a "direct effect" of the irradiation. The effect of the concentration, temperature and pH on the oxidation yields has been determined and the composition of the micro-gaseous mixtures ($H_2 + O_2$) produced has been analyzed. An examination of these kinetic results leads to the conclusion that oxidation by α-rays can be due essentially to the effect of H_2O_2 produced by the radiolysis of water, while for x-rays it would have an effect of competing for the OH radicals which would be capable of oxidizing AsO_2^- as well as reducing AsO_4^{--}, probably passing by an unstable AsO_4 compound. (Author's abstract)

Honda, Hidemasa.
MAGNETOCHEMISTRY OF PETROLEUM. I. RELATIONS BETWEEN THE MAGNETIC SUSCEPTIBILITIES OF HYDROCARBONS AND A NUMBER OF PHYSICAL CONSTANTS. [1959] [32]p. 17 refs.
Order from LC or SLA mi$3.00, ph$6.30 59-14283

Trans. of Nenryo Kyokai-Shi (Japan) 1953, v. 32, no. 316, p. 447-460.

Relationship equations between the magnetic susceptibilities of hydrocarbons which constitute the main components of petroleum and a number of physical constants, such as the number of carbon atoms, specific gravity, molecular weight, molecular volume, refractive index, molecular refraction, and boiling point, were sought. The magnetic correlation index (MI) was obtained from the volume magnetic susceptibility of a hydrocarbon and its specific gravity, and from this (MI) value the series to which the hydrocarbon belonged could be judged; when the series of the hydrocarbon became known, it was possible to determine the molecular volume, refractive index, molecular refraction, and boiling point from the magnetic susceptibility value. (Author's synopsis)

Hubert, E. Matthes, A., and Weisbrod, K.
THE STRUCTURE OF THE GEL OF REGENERATED CELLULOSE FIBRES, I. [1959] [12]p. (1 fig. and discussion omitted).
Order from SLA $2.40, ph$3.30 59-20110

Trans. of Kolloid Zeitschrift (Germany) 1942, v. 98 [no. 2] p. 173-180.

Jordan, P.
NOUVELLE METHODE DE DETERMINATION DE LA SOLUBILITE D UN CORPS SOLIDE A L'AIDE D'UN INDICATEUR RADIOACTIF, tr. by B. Moreau. 15 May 59 [39]p. 9 refs. Trans. no. A 336 (text in French).
Order from SLA mi$3.00, ph$6.30 CEA-tr-A336

Trans. in French of Z[eitschrift für] Phys[ikalische] Chem[ie, Frankfurt] (West Germany) 1956 [Neue Folge] v. 9, no. 3/4, p. 187-216.

Kamiya, Seigo and Tokutomi, Masayoshi.
VITESSE DE L'ÉCHANGE D'IONS D'ACIDE VANADIQUE, tr. by E. Hara. 25 May 59 [20]p. 6 refs. Trans. no. X 137 (text in French).
Order from SLA mi$2.40, ph$3.30 CEA-tr-X137

Trans. in French of [Kogyo Kagaku Zasshi] (Japan) 1957, v. 60, p. 1489ff.

This study is limited to a consideration of conditions of absorption by the polystyrene quaternary amine type exchange resin, Amberlite IRA-411, in an almost neutral medium (pH 7). The factor which determines the speed of the ion exchange is the diffusion of the vanadic acid ions in the ion exchange resin.

Kurda, O. K. and Kleibs, G. S.
THE DECOMPOSITION POTENTIALS AT VARIOUS CURRENT DENSITIES IN THE SYSTEMS $AsBr_3$ - C_2H_5. O. C_2H_5 AND $SbCl_3$ - C_2H_5. O. C_2H_5. 1, tr. by J. B. Sykes. 1955 [10]p. 33 refs. A. E. R. E. Lib/Trans. 607.
Order from SLA mi$1.80, ph$1.80 59-17524

Trans. of Zhurnal Fizicheskoy Khimii (USSR) 1941, v. 15, no. 2, p. 228-233.

Lengyel, Bela von.
DU POTENTIEL LIMITE DE PHASES QUARTZ/SOLUTIONS ELECTROLYTIQUES, tr. by Combaras. 15 May 59 [15]p. (2 figs. 9 tables omitted). Trans. no. A 573 (text in French).
Order from SLA mi$2.40, ph$3.30 CEA-tr-A573

Trans. in French of Z[eitschrift für] Physikal[ische] Chem[ie, Leipzig] (Germany) 1931, v. 153A [no. 5/6] p. 425-442.

Losev, B. I., Troyanskaya, M. A. and Bylyna, E. A.
ACTION OF γ-IRRADIATION ON COAL IN AQUEOUS AND CARBON TETRACHLORIDE MEDIA (Deystviye γ-Izlucheniya na Ugli v Vodnoy Srede i v Srede

Chetyrekhkhloristogo Ugleroda). July 59 [6]p. 8 refs. R. T. S. no. 1106.
Order from LC or SLA mi$1.80, ph$1.80 59-18510

Trans. of Akademiya Nauk SSSR. Doklady, 1958, v. 120, no. 2, p. 314-315.

Brown coal from the Moscow basin, bituminous coal from the Donets basin (P Zh coal), gas coal (G), and coking coal (K) were irradiated in an aqueous medium, with a dosage rate of 200 r/sec and an integral dosage of 10^8 r. The source of the γ-radiation was ^{60}Co. After irradiation the coal was filtered from the water and the aqueous medium was analyzed for germanium by the method developed by the Ukraine Rare Metals Institute. The yield of Ge was 50.2% of the total content in P Zh coal, 41.0% in Moscow brown coal, 13.3% in K coal, and 5.8% in G coal. To investigate the possibility of increasing the yield of Ge from coal the chlorination method (Akad. Nauk SSSR. Doklady 114: 372, 1957) was tried. Samples of coal suspended in carbon tetrachloride were placed in molybdenum glass ampoules and sealed in air. Integral dosages of 10^6, 10^7, and 10^8 r were used. The dosage rate was 200 r/sec in all cases. After irradiation the ampoules were opened. The coal was separated from the liquid phase and both the coal and the liquid phase were analyzed for Ge. The amount of Ge transferred to the liquid phase was very small for the type G and K coals. Even with 10^8-r radiation dosages the amount was only 13% from K coal and 5.6% from G coal. When P Zh coal was tested the amounts transferred were 7.5%, 30.0%, and 53%, respectively, for the three integral radiation dosages used. For Moscow brown coal the yields were 2.9%, 17.4%, and 100%, respectively. The degree of extraction of Ge from the coal depended also on the presence of moisture in the system. When undried carbon tetrachloride was used the Ge yield fell to 40.3% for dried Moscow brown coal and 9.3% for brown coal with a 14% moisture content, with 10^8-r radiation dosages.

Ormont, B. F.
SOME SHORTCOMINGS IN THE DEVELOPMENT OF CHEMICAL THERMODYNAMICS FOR PHASES WITH A VARIABLE COMPOSITION. [1959] 7p. 21 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-17598

Trans. of Zhurn[al] Fiz[icheskoy] Khim[ii] (USSR) 1956, v. 30, no. 8, p. 1896-1899.

Pazukhin, V. A.
CONCERNING THE NATURE OF CRYOLITE-ALUMINA FUSIONS. PTS. I-II. 17 Aug 59, 24p. 18 refs. JPRS: L-1782-D.
Order from OTS $0.50 59-11709

Trans. of Izvestiya Vysshikh Uchebnykh Zavedeniy. Tsvetnaya Metallurgiya (USSR) 1958, no. 2, p. 84-92 and 1958, no. 3, p. 71-78.

The presence of contradictory opinions concerning the nature of cryolite-alumina fusions indicates that it is impossible to consider the hypothesis concerning molecules of Al_2O_3 and AlF_3 in cryolite fusions as well grounded. Bound up with the concept concerning complex ions which are of a stable structure, peculiar to certain chemical compounds, from which it is possible to form a corresponding fusion, this hypothesis does not give bases for somewhat conclusively explaining many properties of cryolite-alumina fusions, whereas all these properties logically follow from ideas concerning the ionic nature of given fusions and of the addition to them of crystallochemical concepts. (Author's conclusion)

Plat'yev, V. V. and Levina, M. I.
EQUILIBRIUM BETWEEN LIQUID AND GAS AT HIGH PRESSURES AND TEMPERATURES (Ravnovesiye Mezhdu Zhidkost'yu i Gazom pri Vysokikh Davleniyakh i Temperaturakh). [1959] [22]p. 19 refs. F-TS-9670/V.
Order from LC or SLA mi$2.70, ph$4.80 59-14126

Trans. of Khimiya Tverdogo Topliva (USSR) 1937, v. 8, no. 10, p. 866-875.

The solubility of H_2, CO, N_2 and CH_4 in shale gasoline at temperatures of 25 and 150° and pressures of 100 and 200 kg/cm^2, and of CO_2 at 25, 75, 150 and 200° and pressures of 25 and 50 kg/cm^2, has been determined. The solubility of H_2, CO, N_2 and CH_4 in kerosene at temperatures 25, 150 and 300° and pressures of 100 and 200 kg/cm^2 and of CO_2 at the same temperatures and at pressures of 25 and 50 kg/cm^2 has been determined. The solubility of H_2, N_2 and CO, in petroleum products increases with a rise in temperature and with a constant overall pressure, whereas the solubility of CH_4 and CO_2 decreases in the same circumstances. The solubility of H_2 in different kinds of gasoline, kerosene, cracking phlegm, and tars at temperatures of from 25 to 300° and pressures of 50, 100, and 200 kg/cm^2. (Author)

Plotnikov, V. A. and Yakubson, S. I.
AN ELECTROCHEMICAL INVESTIGATION OF THE TERNARY SYSTEM AL-Br_3-$AsBr_3$-BENZENE, tr. by J. B. Sykes. 1955 [8]p. 10 refs. A.E.R.E. Lib/Trans. 608.
Order from SLA mi$1.80, ph$1.80 59-17525

Trans. of Zhurnal Fizicheskoy Khimii (USSR) 1936, v. 8, no. 1, p. 159-164.

On measuring the specific electric conductivity of the ternary system $AlBr_3$-$AsBr_3$-benzene, the maximum conductivity is found for equivalent ratios of aluminum bromide and arsenic bromide. The specific electric conductivity of the system varies with time, especially during the first day after the solution has been prepared. For 32.8% $AlBr_3$ and 37.5% $AsBr_3$, at first $\kappa = 3.91 \times 10^{-6}$, and after 3 hours 1.78×10^{-5}. The constant of formation of the complex was calculated from the equations

$$AlBr_3 + 3C_6H_6 = AlBr_3.3C_6H_6, \text{ and}$$
$$AlBr_3.3C_6H_6 + AsBr_3 = [AsBr_3.AlBr_2]^+ + Br^- + 3C_6H_6.$$

The constant varies from 81×10^{-5} to 110×10^{-5}, whilst the conductivity varies by a factor of approximately a thousand. On electrolysis with a platinum cathode and an aluminum anode, arsenic is evolved at the cathode and bromine at the anode. The decomposition potential was found to be 0.66 v, corresponding to that of $AsBr_3$, calculated from Thomson's formula as 0.659 v. Cryoscopic measurements have shown that the $AsBr_3$ is in the state of monomeric molecules. No

change of the depression with time was observed in a benzene solution of aluminum bromide. (Extracted from the report)

Plyushchev, V. Ye., Markina, I. B., and Shklover, L. P.
DIAGRAMS OF PHASE TRANSFORMATIONS OF BINARY SYSTEMS FORMED BY NITRATES OF RUBIDIUM AND CESIUM WITH THE NITRATES OF STRONTIUM AND BARIUM. Aug 59 [10]p. 12 refs. Picatinny Arsenal Trans. no. 50.
Order from LC or SLA mi$1.80, ph$1.80 59-19242

Trans. of Zhur[nal] Neorg[anicheskoy] Khim[ii] (USSR) 1956, v. 1, p. 1613-1618.

Prettre, M.
MECHANISM OF THE OXIDATION OF HYDROCARBONS. [1959] 7p. 37 refs. R. T. P. Trans. no. 2418.
Order from SLA mi$1.80, ph$1.80 59-17686

Trans. of Acta [Physicochimica U. R. S. S.] (USSR) 1938, v. 9, no. 3/4, p. 581-592.

The existence of the two inflammation temperature regions of nearly all paraffinic combustible mixtures, as well as the influence, sometimes negative, of a temperature increase on the slow oxidation of these mixtures, allow the assumption that these mixtures can react according to two distinct mechanisms, one of which occurs at temperatures of about 200 to 300°, and the other at definitely higher temperatures. The first mode produced organic peroxides which play an important part in the occurrence of the cold flame. The second is responsible for the inflammation observed at about 500°C, in which the peroxides take no part. Analogies between the kinetic relations valid for these two kinds of oxidation must, if they are confirmed, indicate that the two mechanisms are not without some similarity and that some similar chain reactions occur in both cases. (Author's summary)

Putseyko, Ye.
PHOTOELECTRIC SENSITIVITY OF CHLOROPHYLL AND ITS ANALOGS IN VARIOUS CONDITIONS. [1959] [5]p. 16 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-17776

Trans. of Akad[emiya] Nauk SSSR. Doklady, 1959, v. 124 [no. 4] p. 796-799.

A study is presented of the photoelectrical properties of chlorophyll and its analogs occurring in different states of aggregation and adsorbed on semiconductors and certain metals. The detection and measurement of a photoeffect through the spectrum of powdered semiconductors and dyes was carried out by the condenser method according to the change of diffusing photo-emf arising in the illuminated part of the semiconductor under the influence of modulated illumination. In parallel with the condenser method, the usual method of photoconductivity was also used. The data obtained indicate that sensitization of the photoeffect on ZnO is caused by individual molecules of Mg-phthalocyanine and is not due to the natural sensitivity of the pigment in the aggregated state, and that the sensitizing capacity of chlorophyll, having conducting "holes" in relation to an electron semiconductor of the ZnO type, can not be ascribed to the transfer of electrons from pigment to ZnO. The data appear to support the idea that the mechanism of sensitization is one of energy transfer. (Extracted from the report) (See also 59-10253, 59-10386, 59-10485 through 59-10488, 59-11296)

Sator, Abdelhak.
REVERSIBLE PILE WHOSE ELECTROLYTE IS A CRYSTAL DEPOSITED IN A THIN LAYER BY EVAPORATION (Pile Réversible dont l'Électrolyte est un Cristal Déposé en Lame Mince par Evaporation). [1959] [3]p. 3 refs. No. 219.
Order from SLA mi$1.80, ph$1.80 59-17921

Trans. of Academie de Sciences, Paris. Comptes Rendus (France) 1952, v. 234, no. 23, p. 2283-2285.

The electrolyte is a crystal of chloride of lead deposited in a layer of a thickness of around a micron. The positive pole is a silver electrode covered by silver chloride, the negative pole is of lead. (Author)

Sattler-Dornbacher, Erich.
CALCUL DES EXTRACTIONS SOLIDE-LIQUIDE PAR CONTRECOURANT POUR DISSOLUTION LENTE OU AVEC PHENOMENES D'ABSORPTION SIMULTANES, tr. by Pfeiffer. 30 Jan 59 [18]p. 2 refs. Trans. no. A 518 (text in French).
Order from SLA mi$2.40, ph$3.30 CEA-tr-A518

Trans. in French of Chem[ie]-Ing[enieur]-Techn[ik] (West Germany) 1958, v. 30, no. 1, p. 14-18.

The application of the principle of the counter-current for the extraction of soluble compounds offers the advantage of obtaining a high final concentrate. Calculations are based on speed of dissolution of a weak extract, or on absorption of the extract by the initial solid.

Schindewolf, U. and Bonhoeffer, K.-F.
DÉTERMINATION DE L'ACTIVITÉ IONIQUE AU MOYEN DE MEMBRANES ÉCHANGEUSES D'IONS, ET SON APPLICATION À LA MESURE DU DEGRÉ DE DISSOCIATION DES POLYPHOSPHATES. 4 Feb 59, [25]p. 21 refs. Trans. no. A 520.
Order from SLA mi$2.70, ph$4.80 CEA-tr-A520

Trans. in French of [Zeitschrift für] Elektrochem[ie] (West Germany) 1953, v. 57, no. 3, p. 216-221.

The present study concerns a synthetic ion exchanger membrane which is permeable solely to cations, and which is used for potentiometric measurements of the ionic activity in electrolyte solutions. The method should be used with certain reservations: the concentration of the solution in question should be weak in respect to the concentration of the fixed ions of the membrane, and the solution should contain only cations of a single kind. The method is unsuccessful when the pH values are slight. The cations should be smaller than the pores of the membrane. These membranes serve to measure the degree of dissociation in alkaline polyphosphates.

Schmahl, N[orbert] G., Bauman, H[ans] and Schenck, H[ermann].
L'INFLUENCE DE LA TEMPERATURE SUR L'OXYDATION DU FER PUR DANS L'OXYGENE, tr. by Englender. 17 Feb 59 [20]p. (2 tables omitted) 43 refs. Trans. no. A 528.
Order from SLA mi$2.40, ph$3.30 CEA-tr-A528

Trans. in French of Arch[iv für das] Eisenhütten-w[esen] (West Germany) 1958, v. 29, no. 2, p. 83-88.

Schwab, G. M., Greger, G., and others.
L'ACTION CATALYTIQUE DES SEMI-CONDUCTEURS INTRINSEQUES, tr. by R. Baboz. 4 Feb 59 [13]p. 10 refs. Trans. no. A 455 (test in French).
Order from SLA mi$2.40, ph$3.30 CEA-tr-A455

Trans. in French of Z[eitschrift] für Phys[ikalische] Chemie [Frankfurt] (West Germany) 1958 [Neue Folge] v. 15, p. 363-371.

The hydrogenation of ethylene, and the dehydrogenation of formic acid and ethanol by catalytic action of germanium, silicon and certain indium alloys are examined.

Semenoff, N.
THE THEORY OF THE COMBUSTION PROCESS, tr. by I. Alcock. [1959] 9p. 15 refs. R. T. P. Trans. no. 2380.
Order from SLA mi$1.80, ph$1.80 59-17671

Trans. of Zeitschrift für Physik (Germany) 1928, v. 48, [no. 7/8] p. 571-582.

Suhrmann, R. and Wedler, G.
ETUDE, EN FONCTION DU TEMPS, DE LA CHIMIESORPTION DE LA VAPEUR D'EAU ET DU CO_2 PAR DES FILMS DE NICKEL VAPORISES ET TRANSPARENTS, tr. by B. Moreau. 15 May 59 [39]p. 9 refs. Trans. no. A 371 (text in French).
Order from SLA mi$3.00, ph$6.30 CEA-tr-A371

Trans. in French of Z[eitschrift für] Phys[ikalische] Chem[ie, Frankfurt] (West Germany) 1957 [Neue Folge] v. 10, p. 184-212.

Tödt, F.
APPLICATION OF THE ELECTROCHEMICAL DETERMINATION OF OXYGEN, tr. by R. J. Richardson. 1955 [14]p. (2 figs. omitted) 16 refs. A. E. R. E. Lib/Trans 633.
Order from SLA mi$2.40, ph$3.30 59-17547

Trans. of Angewandte Chemie (West Germany) 1955, v. 67, no. 9/10, Suppl, p. 266-270.

Trzebiatowski, W.
LA CONDUCTIBILITE ELECTRIQUE DES METAUX DE SYNTHÈSE, tr. by Brosse. 15 May 59 [17]p. Trans. no. A 290 (text in French).
Order from SLA mi$2.40, ph$3.30 CEA-tr-A290

Trans. in French of Z[eitschrift fur] Phys[ikalische] Chem[ie, Leipzig] 1934, v. 24B, no. 1. p. 87-97.

Gold and copper powders of great fineness and purity were subjected to a pressure of 30,000 atm for one minute. Electrical resistance of the resulting agglomerates was observed at temperatures varying from 18° to 600°. The coefficient of temperature was found to be positive to about 100°, then negative, becoming positive again above 300°. The variation is attributed to absorb gases, and to the process of recrystallization.

Ussanowitsch, M.
THE NATURE OF THE CONDUCTIVITY OF NON-AQUEOUS SOLUTIONS, tr. by R. S. Forsyth. 1955 [23]p. 45 refs. A. E. R. E. Lib/Trans. 595.
Order from SLA mi$2.70, ph$4.80 59-17448

Trans. of Acta Physicochimica U. R. S. S. (USSR) 1935, v. 2, no. 2, p. 239-271.

The study of the conductivity and the temperature coefficients of conductivity, of several binary systems, having one component as either ethyl ether or several other ethers, has shown that in all these systems, definite chemical compounds of the components act as the electrolytes. Only those substances which have acidic functions give conducting solutions with ethers; $AsCl_3$ and its analogues give conducting systems only with bases. Therefore, if a conducting solution is formed after mixing two non-conductors, it is usually essential that the components should combine with one another and have opposing chemical properties. The study of the systems composed of ethyl ether and the tri-halides of the elements of Group V shows a regular variation of the conductivity in an homologous series. In the majority of the systems containing sulphuric acid, the conductivity depends upon the existence of compounds of sulphuric acid and the second component, which in this case acts as a base. In the HNO_3 - H_2SO_4 system, the nitric acid acts as a base, so that H_2SO_4 is proved to be a stronger acid than HNO_3. A new type of relationship between conductivity and concentration has been found, from the study of the H_2SO_4 - $(CH_3)_2SO_4$ system and the H_2SO_4 - CCl_3COOH system, in which no compounds are formed. The only influence of the second component was its viscosity. As a result, the introduction of the viscosity correction enables conductivity measurements on two systems to be carried out from the same curve. The identical nature of the conductivity curves of H_2SO_4 in two solvents whose dielectric constants are widely different, disproves the Nernst-Thomson rule. The usual shape of the specific conductivity curves proves the formation of compounds from the components. (Extracted from the report)

Volarovich, M. P.
REVIEW OF "PHYSICO-CHEMICAL HYDRODYNAMICS" BY V. G. LEVICH, tr. by V. Beak. [1959] [5]p. AERE Lib/Trans. 477.
Order from SLA mi$1.80, ph$1.80 59-17324

Trans. of Uspekhi Fizicheskikh Nauk (USSR) 1954, v. 51, no. 1, p. 155-158.

The contents of the book can be divided, basically into two parts. To the first of these belong problems of various types connected with the transfer of particles (dissolved molecules or ions) by the flow of liquid. The phenomenon of the transfer of substance by a moving liquid (convective diffusion) plays an essential part in various physico-chemical and physical processes. As an example we may quote the processes of dissolving or precipitation from solutions, physical and chemical processes taking place at phase interfaces: adsorption, heterogeneous chemical reactions, the process of electrolysis, etc. The second group of questions is connected with the influence of the physico-chemical properties of the liquid upon its movement. To this group may be referred the influence on the process of the movement of liquids, of surface tension, surface-active substances or changes at the surface of the liquid and other such factors. (Extracted from the report)

Volkenshteyn, F. F.
SEMICONDUCTORS AS CATALYSTS IN CHEMICAL REACTIONS (Poluprovodniki kak Katalizatory Kimicheskikh Reaktsii). Dec 57 [32]p. 51 refs. C. T. S. no. 390.
Order from LC or SLA mi$3.00, ph$6.30 59-18528

Trans. of Uspekhi Fizicheskikh Nauk (USSR) 1956, v. 60, no. 2, p. 249-293.

Data are given which show that the catalytic properties of semiconductors are closely related to the electronic processes occurring within the upon the semiconductor, and in the final reckoning are due to them.

Weiss, H.
ON THE ELECTRICAL PROPERTIES OF InSb (Über die Elektrischen Eigenschaften von InSb). [1959] [10]p. 8 refs. No. 255.
Order from SLA mi$1.80, ph$1.80 59-17906

Trans. of Zeitschrift für Naturforschung (West Germany) 1953, v. 8a, no. 8, p. 463-469.

Supplementing earlier statements published by H. Welker (Z. Naturforsch. 7a: 744, 1952 and 8a: 248, 1953), results of measurements of conductivity, Hall effect and magnetic change of resistance on InSb are communicated. With the help of the Hall effect there were found, depending in each case on content of disturbance points, preparations with n- as well as with p-conduction. At room temperature one obtains as maximum electron mobility 41,000 $cm/^2$voltsec, whereas the maximum change of resistance in a magnet field of 10,000 Gauss is 150%.

Wojciak, Waclaw.
PROPRIÉTÉS PHYSICO-CHEMIQUES DES HYDROSOLS D'OR STABILISÉS PAR LE PROTALBINATE DE SODIUM. 6 Apr 59 [31]p. 42 refs. Trans. no. X 127 (text in French).
Order from SLA mi$3.00, ph$6.30 CEA-tr-X127

Trans. in French of Rocz[ni]ki Chem[ii] (Poland) 1957, v. 31, p. 601-620.

The color of Paal's gold hydrosols does not change with aging, nor does it change under UV radiation. It is probable that a process of reduction to colloid gold occurs in the course of aging. Apparently phenomena leading to coagulation occur under the influence of UV radiation.

Ziegler, K. and Gellert, H. G.
RECHERCHES SUR LES COMPOSES CYANO-ALCALINS. XVI. STABILITE A LA CHALEUR DES COMPOSES ALCOYLÉS DU LITHIUM, tr. by R. Carbonnier. 25 Mar 59 [5]p. 5 refs. Trans. no. A 553 (text in French).
Order from SLA mi$1.80, ph$1.80 CEA-tr-A553

Partial trans. in French of [Justus Liebigs] Annal-[en der] Chem[ie] (West Germany) 1950, v. 567, p. 179-185 and 195.

EARTH SCIENCES

Denys, Gerhard.
ANATOMICAL ANALYSIS OF POLYIDES ROTUNDUS CMEL. AND FURCELLARIA FASTIGIATA LAM. Rept. of the Botanical State Institutes in Hamburg. [1959] [41]p. (1 fig. omitted).
Order from SLA mi$3.30, ph$7.80 59-17692

Trans. of Jahrbuch der Hamburgischen Wissenschaftlichen Anstalten (Germany) 1909/10, v. 27, Beiheft 3, p. 1-31.

Kadeyerov, G. F.
EXPERIMENTAL SAMPLING OF BERYL-BEARING PEGMATITES. [1959] 14p. 4 refs.
Order from LC or SLA mi$2.40, ph$3.30 59-16370

Trans. of Razvedka i Okhrana Nedr (USSR) 1958, v. 24, no. 10, p. 18-22.

Khmelyovskaya, L. V., Morozova, N. G. and others.
ON THE SUBJECT OF PARAGENESIS OF TITANIUM, ORGANIC CARBON, AND SOME OTHER ELEMENTS (K Voprosu o Paragenezise Titana, Organicheskogo Ugleroda i Nekotorykh Drugikh Elementov) tr. by V. P. Sokoloff. 28 Apr 59 [8]p. 4 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-16376

Trans. of Akademiya Nauk SSSR. Doklady, 1948, v. 63, no. 6, p. 713-715.

Experimental data are presented which indicate that authigenic titanium minerals found in the heavy fraction (of the sediments-VPS) are essentially altered products of the mineral residue of organic substance.

Rakhmanov, V. V.
THE INFLUENCE OF FORESTS ON THE FORMATION OF SNOW ACCUMULATIONS (Vlyaniye Lesov na Formirovaniye Snezhnykh Zapasov). Jan 58 [11]p. 24 refs. C. T. S. no. 424.
Order from LC or SLA mi$2. 40, ph$3. 30 59-18534

Trans. of Meteorologiya i Gidrologiya (USSR) 1956, no. 11, p. 21-28.

Sokolov, V. I., ed.
METHOD OF COMPUTING PHOTO DATA FOR PHOTORECONNAISSANCE MISSIONS; AERIAL PHOTOGRAPHY (Vozdushnoye Fotografirovaniye). 19 June 59 [20]p. 9 refs. AF 1255880.
Order from LC or SLA mi$2. 40, ph$3. 30 59-18441

Summary trans. of mono. Spravochnik Aviatsionnogo Shturmana (Air Navigator's Reference Book) 1957, p. 191 and 367-386.

Climatology and Meteorology

LITERATURE ON METEOROLOGY AND HYDROLOGY IN 1956 (CONTINUATION). Articles on Books and Brochures, Agrometeorology, Hydrology and Oceanography. 18 Aug 59, 6p. JPRS: L-901-D.
Order from OTS $0. 50 59-11599

Trans. of Meteorologiya i Gidrologiya (USSR) 1957, no. 6, p. 59-61.

Entries in each section are listed by author (or by title if no author is given) according to the Cyrillic alphabet. There are 28 entries under the heading "Books and Brochures", 4 under "Agrometeorology", 14 under "Hydrology", and 10 under "Oceanography". (See also 59-11506, 59-11528, 59-13225)

Girs, A.
LONG-RANGE PROGNOSES OF THE WEATHER FOR THE ARCTIC AND THE METHOD BY WHICH THEY ARE COMPILED. 1 Sep 59, 10p. 1 ref. JPRS: L-958-N.
Order from OTS $0. 50 59-13850

Trans. of Morskoy Flot (USSR) 1959 [v. 19] no. 3, p. 18-20.

Grinev, P. and Kravchuk, G.
WEATHER RECONNAISSANCE BY RADAR (Radiolokatsionnaya Razvedka Pogody). 1959, 3p. AF 1255792.
Order from LC or SLA mi$1. 80, ph$1. 80 59-16333

Summary trans. from Sovetskaya Aviatsiya (USSR) 1959, 7 Apr, p. 2.

Nepomnyashchiy, S. I.
THE AIRCRAFT RADIO DROP-SONDE (Samoletnyy Sbrasyvayemyy Radiozond) tr. by Marcel I. Weinreich. 23 Mar 59, 61p. 5 refs. (foreign text included).
Order from LC or SLA mi$3. 90, ph$10. 80 SCL-T-238

Trans. of Nauch[no]-Issled[ovatel'skiy] Inst[itut] Gidromet[eorologicheskogo] Priborostroyen[iya]. [Trudy] (USSR) 1957, v. 5, p. 17-40.
Another translation is available fromOTS $1. 00 as JPRS(DC)-L-1384, 59-11419, 9 Jan 59, 30p.

A parachute "dropsonde" was developed for measurement of pressure, temperature, and humidity at different elevations from jet aircraft. Measurement results transmitted from the "dropsonde" by radio telegraphic signals. The pressure unit consists of a group of 3 diaphragm barometer capsules of beryllium bronze. A high accuracy of compensation and linear characteristics for pressure is achieved by calculation and adjustments of compensators. The temperature unit consists of 2 bimetallic plates joined by a common base and having a common shaft. Radiation has no substantial influence on the temperature unit, but a method is given for correcting for inertia in the readings. The humidity unit consists of a tuft of hair 120 mm long stretched over a roller. The length of the hair changes with variations in humidity. The stretch of the hair with a change in humidity from 0 to 100% is 2% of its initial length. The electric motor unit is battery fed with 3 sources of current, and a dc commutator micromotor turns the code sectors. Before drop, the aircraft electrical system feeds the radiosonde. The parachute system, its package, the load, the speed of descent, the departure, and the braking effect are discussed.

Yamamoto, Takeo.
RELATIONSHIP OF JET STREAM SECULAR VARIATION TO GLACIER ACTIVITY. [1959] [5]p. 9 refs.
Order from SLA mi$1. 80, ph$1. 80 59-15759

Trans. of Quaternary Research (Japan) 1958, v. 1, no. 2, p. 45-48.

The advances and retreats of the Alpine glaciers show a surprising correspondence to the fluctuations of tree-growth at Mt. Alishan (23°30'N 120°48'E, 2676 m) in Formosa. It is supposed that jet stream intensification might cause the retreat of glaciers in the Alps, by activating the lateral mixing of cold and warm air, while in the Far East the stronger jet would depress the amount of summer precipitation brought by the south-eastern monsoons, on which tree-growth might depend. (Author)

Physics of the Atmosphere

Kogan-Beletskiy, G. I.
THE PROBLEM OF DETERMINING THE BOUNDARIES OF THE TROPOPAUSE (K Voprosu Opredeleniya Granits Tropopauzy) tr. by John Miller. Nov 58 [11]p. 9 refs.
Order from LC or SLA mi$2. 40, ph$3. 30 59-16568

Trans. of Meteorologiya i Gidrologiya (USSR) 1957, no. 12, p. 36-39.
Another translation is available from LC or SLA mi$2.40, ph$3.30 as SCL-T-207, 59-10562 [1958] [12]p.

A method of boundary determination based on the formation of stable condensation vapor trails from turbojets is proposed.

Milin, V. B. and Tverskoy, P. N.
THE STUDY OF THE ION RECOMBINATION CONSTANT IN TURBULENT ATMOSPHERE (Izucheniye Postoyannoy Propadaniya Ionov v Turbulentnoy Atmosfere) tr. by A. Pingell. 1958, 12p. 6 refs. NRL trans. no. 671.
Order from LC or SLA mi$2.40, ph$3.30 59-16159

Trans. of Leningrad U. Uchenye Zapiski (USSR) 1956, no. 210, p. 72-82. Seriya Fizicheskikh Nauk, no. 9.

A theory is developed that makes it possible to calculate the ion recombination constant β in dependence on the turbulent exchange in the atmosphere under natural conditions as well as under an artificially produced ionization. The calculation formulae may likewise be used for determining the coefficients of turbulence in the atmospheric layer nearest the earth. The experimental results have shown a good agreement between the new method and those generally accepted in practice for determining k according to the vertical profile of temperature and wind proposed by Budyko (PB 89 335) and Laikhtman. (See also 59-11364, 59-11529)

ENGINEERING

Coers, R.
INVESTIGATIONS ON AN EVAPORATIVE CONDENSER. PTS. I-II, tr. by R. J. Richardson. 1955 [24]p. 31 refs. A. E. R. E. Lib/Trans. 592.
Order from SLA mi$2.70, ph$4.80 59-17435

Trans. of Kältetechnik (West Germany) 1955, v. 7, no. 2, p. 34-38 and no. 3, p. 71-74.

A condenser provided with a finned tube system was operated with air cooling alone, and with fresh water cooling alone, as an evaporative condenser, and as a reflux condenser. The measured results showed the strong influence of largely unobserved construction details, and gave support to consideration of these, for calculation purposes. (Author) (Extract from a thesis approved by the Machinery Faculty of the College of Technology, Karlsruhe.)

Faberov, I.
HYDRAULIC DISRUPTION OF SEAMS IN THE UNDERGROUND GASIFICATION OF COAL. [1959] [7]p. 10 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-16737

Trans. of Podz[emnaya] Gaz[ifikatsiya] Ugley (USSR) 1958, no. 1, p. 31-34.

Findel, H.
CREUSEMENT DES GALERIES AU ROCHER DANS LES MINES MÉTALLIQUES. CONDITIONS PARTICULIÈRES DU HARZ, tr. by Brini. 6 Mar 59 [24]p. (table omitted) Trans. no. A 205 (text in French).
Order from SLA mi$2.70, ph$4.80 CEA-tr-A205

Trans. in French of [Zeitschrift für] Erz[bergbau und] Metall[hüttenwesen] (West Germany) 1954, v. 7, no. 2, p. 45-53.

This discussion, which deals for the most part with the economic aspects of mining, is based on practical experience in exploitation of small veins in the Harz, especially in the Grund mine.

Harms, Ulrich.
METHOD AND APPARATUS FOR RAISING SUNKEN VESSELS OR THE LIKE, tr. by FHB. 21 May 59, 7p. (2 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-16841

Trans. of German patent 950,050, Class 65 b, Group 16, International classification B 63 c; patented from 25 Sep 54, pub. 4 Oct 56.

The method is characterized in that as lift-producing means lifting bodies of plastic material or inflatable elastic hollow bodies, themselves known, are conveyed into the wreck body by means of compressed air, through the pipe or hose conduit by way of one or several openings made as deeply under the water level as possible. The lifting bodies are joined like strands and consist of plastic material, for instance polystyrine foam or polyvinyl chloride, whose pores have air inclusions. The pipe or hose conduit has in the rectangularly bent pipe pieces guide rollers or the like for diminishing the friction for the lifting elements.

Muller, W.
CONSIDÉRATIONS MODERNES SUR LE CREUSEMENT DES GALERIES AU ROCHER, tr. by Brini and Carbonnier. 10 Mar 59 [41]p. 2 refs. Trans. no. A 206 (text in French).
Order from SLA mi$3.30, ph$7.80 CEA-tr-A206

Trans. in French of [Zeitschrift für] Erz[bergbau und] Metall[hüttenwesen] (West Germany) 1954, v. 7, no. 2, p. 53-65.

This discussion is based on practical experience in the completely mechanized operations of the Friedrich-Heinrich coal mine at Kamp-Lintfort. The primary factors under consideration are cost and organization. The paper is followed by the comments of various experts.

Protodyakonov, M. M. and Voblikov, V. S.
DETERMINATION OF ROCK STRENGTH BY USING IRREGULAR-FORM SPECIMENS. [1959] (1 fig. omitted) 7 refs.
Order from LC or SLA mi$2.40, ph$3.30 59-16369

Trans. from Ugol' (USSR) 1957, v. 32, no. 4.

The technique and conditions are described for determining the ultimate resistance to compressive force by using irregular-form specimens instead of usual cubes and cylinders. This new and simplified technique for testing rock strength opens opportunities for its employment at the mine level, thus introducting a new tool for scientific control of mining operations. Mathematical and graphical comparison is made of the following: k the coefficient of rock strength for irregular-form specimens; σ' the coefficient of rock strength for regular-form specimens, and f, the coefficient of rock strength, according to rock classification proposed by Protodiakonov.

Winandy, Edouard B.
SUBTERRANEAN LOGISTICS FOR ROCKET AND GUIDED MISSILE BASES (Logistique Souterraine des Bases de Fusées et d'Engins Guidés). [1959] 22p. 13 refs. F-TS-9105/V.
Order from LC or SLA mi$2.70, ph$4.80 59-14110

Trans. of Fusées et Recherche Aéronautique (France) 1956, v. 1, no. 2, p. 171-178.

The use of subterranean facilities is highly economical, in contrast to brick or cement buildings which are subject to more or less expansion and wear, in above-ground installations. When dug several hundred meters into solid rock, a subterranean installation offers complete protection from atomic weapons and will, in addition, last for centuries. This will be true only if, human beings can live and work there under proper conditions of lighting, power, and heat, provided by adjacent erection of a subterranean dam which is properly protected and is of moderate cost. (Extracted from the report)

Aeronautical Engineering

BLIND FLYING DEVICE. [1959] 6p. (1 fig. omitted) R. T. P. Trans. no. 2411.
Order from LC or SLA mi$1.80, ph$1.80 59-17708

Trans. of German patent 654113, cl. 62c, gr. 25, 16 Dec 37, by Allgemeine Elektrizitats-Gesellschaft, Berlin.

A device is described for determining the direction or relative distance from an objective, of travelling bodies, in particular aircraft, operative in mist and fog, employing modulated light rays and radiation-sensitive devices on the travelling body, in which the light-responsive device is arranged to receive principally diffused light from both sides of the body, selectively-tuned to the standard or specially-adapted modulation frequency of stationary sources of light, in particular town and aerodrome illumination, the currents or current fluctuations released by the received radiation being led to an indicating instrument simultaneously determining both the direction of the stationary source of light with reference to the moving body, and the relative distance of change in relative distance, of the latter from the former. The photoelectric element is suitably connected through amplifier and rectifier arrays to a single device in the manner that the ac components produced in the photocells separately actuate the indicating device.

GIORGIO EVANGELISTI FLEW THE METEOR FL-53, 54, AND 55 (Giorgio Evangelisti Vloog de Meteor FL-53, 54 en 55) tr. by M. A. H. [1959] [3]p. (2 photos omitted). H-2586.
Order from OTS $0.50 59-11896

Trans. of Avia Vliegwereld (Netherlands) 1958 [v. 7, no. 12] p. 330.

Information, taken from an unidentified Italian report, is presented concerning the 2-seater, 3-seater, and 4-seater aircraft respectively designated Meteor F1-53, 54, and 55, which were developed from the reconnaissance and touring plane (the FL-3?) that was built from 1939 to 1948 by the Avia factories at Vercelli (now moved to Trieste and Monfalcone).

REPORT ON TEMPERATURE MEASUREMENTS ON THE WING OF A HE. 177 WITH HOT AIR DE-ICING SYSTEM. [1959] 16p. R. T. P. Trans. no. 2533.
Order from SLA mi$2.40, ph$3.30 59-17707

Trans. of mono. Temperaturmessungen am Tragflügel einer He 177 mit Warmluftenteisungsanlage, Göttingen, 1 Oct 41, Rept. 41-7-p 2.

Altogether 7 flights with 13 series of measurements were carried out. The flight programme was sometimes varied following the measurement results and because of the weather, which prohibited flights at altitudes above 500 to 600 m. An accompanying numerical table contains the values for the quantities of heat at different speeds. The excess temperatures at the individual positions compared with the outside temperatures are plotted against the wing chord and span.

Busemann, A.
LAVAL NOZZLES FOR UNIFORM SUPER-SONIC FLOW. [1959] 9p. 7 refs. R. T. P. Trans. no. 2511.
Order from SLA mi$1.80, ph$1.80 59-17688

Trans. of V[erein] D[eutscher] I[ngenieure]. Z[eitschrift] (Germany) 1940, v. 84, no. 45, p. 857-862.

The author deals with certain sections in the field of experimental gas dynamics, which are related to the flows in steam turbines, using striation photographs as illustrations. Attention is centred on the flow in a Laval nozzle. The behaviour of the supersonic flow gives rise usually to a jet with a ruffled velocity distribution in the expanded part of the Laval nozzle. It is only by applying special measures in the shaping of the nozzle, for which a definite minimum length is required, that it is possible to obtain also for the supersonic flow, a velocity distribution of such smoothness that it can be used for high speed channels. The various decisive aspects of the question are reviewed. In addition, reference is made to the nozzle with mouth cut off obliquely and the production of such smoothness shocks. (Paper read at the VDI Congress "Wärme und Strömung" (Heat and Flow) on 1st. July 1940)) (RTP abstract)

Garnier, Raymond.
DEVICE IMPROVING THE SECURITY OF REGULATORS FOR AIRPLANE PROPELLERS WITH HYDRAULIC CONTROL OF PITCH VARIATION, tr. by C. P. 4 Aug 59, 6p. (3 figs. omitted).
Order from LC or SLA mi$1.80, ph $1.80 59-19222

Trans. of French patent 1,141.985, gr. 6-, cl.4. appl. 23 Dec 55, granted 25 Mar 57, pub. 12 Sep 57.

The present invention concerns an arrangement capable of being attached to or incorporated in present day hydraulic regulators for propellers with variable pitch to insure putting the propeller in "feathering" position under all conditions, and more particularly whatever may be the postion of the internal elements of the regulator, by means of a distributing cock or by-pass, which permits sending the oil directly from the auxiliary pump for feathering to the propeller, either in the form of a separate relief control or in a permanent manner by means of a combined control.

Degn, P. F.
PROPELLER WITH NON-RIGID BLADES. 31 July 59, 2p. (2 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-18783

Trans. of German patent 214229, cl. 77 h, gr. 6, pat. 12 Mar 08, pub. 9 Oct 09; addition to patent 214228, 25 Oct 1907.

A propeller is described with non-rigid blades as in patent no. 214228, characterized in that the entering and trailing edges of each pair of adjacent blades are connected with one another by one or more cables or chains which latter are fastened in the plane of rotation of the blades for the purpose of preventing a fluttering of the blades. The cables or chains serving for the connection of the blades are attached to special arms on the blades for the purpose of obtaining a specific pitch.

Kiryushkin, N.
PLOTTER FOR PLOTTING THE AZIMUTH LINES (Prokladchik Liniy Ravnykh Azimutov). 3 Mar 59 [2]p. AF 1255587.
Order from LC or SLA mi$1.80, ph$1.80 59-16326

Summary trans. from Sovetskaya Aviatsiya (USSR) 1958, 23 Mar, p. 2.

Mazzuchelli, P.
THE AERO-ENGINE CYLINDER. [1959] 6p. R. T. P. Trans. no. 2404.
Order from SLA mi$1.80, ph$1.80 59-17728

Trans. of Flugwehr und Technik (Switzerland) 1943, v. 5, no. 12, p. 328-330.

(This article is taken from the book "The Evolution of the Aero-Engine and Its Problems" by P. Mazzuchelli, which was scheduled for publication in the Avia series).

Oehmichen, Etienne.
LIFTING PROPELLER WITH REGULATOR. 8 July 59, 12p. (7 figs. omitted).
Order from LC or SLA mi$2.40, ph$3.30 59-18776

Trans. of French patent 631596, gr. VI, cl. 4, appl. 18 June 26, granted 17 Sep 27, pub. 22 Dec 27.

Pescara, Raoul Pateras.
AERIAL PROPELLERS PROVIDED WITH BLADES WITH VARIABLE INCIDENCE AND DEFLECTION, tr. by CP. 29 June 59, 5p. (2 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-18283

Trans. of French patent 506, 479, Class VI-4; applied for 22 Nov 19, granted 29 May 20, pub. 23 Aug 20. (Application for patent filed in Spain 27 Nov 18--statement of applicant).

The object of the present patent application is to insure the steering, manipulation and stability of aircraft of the helicopter type. The device is characterized by the use of a special construction which permits (during flight) varying of the incidence of the ensemble of the blades and at the same time deflecting (warping) of a more or less extensive region of their surfaces and preserving the faculty of employing separately or simultaneously these two methods of action depending on the exigencies of manipulation of the aircraft. A practical realization of such a device can be obtained by the use of a cam and an eccentric, the cam actuating by means of a screw thread the movements of variable incidence which are rotations of the blade about its longitudinal axis and the eccentric e controlling by intermediary of another screw thread the movements of the deflecting (warping) element. The transmission of the rotary motions along the blades is effected by means of concentric tubes separated by means of ball bearings. (Extracted from the report)

Pokrovskiy, G. I.
G. I. POKROVSKIY'S CONCEPT OF AIRCRAFT OF THE FUTURE. 27 Apr 59 [2]p. (3 figs. omitted) AF 1255748.
Order from LC or SLA mi$1.80, ph$1.80 59-16339

Summary of Sovetskaya Aviatsiya (USSR) 1957, no. 282, p. 3, c. 5-7 and 1959, no. 86, p. 4, c. 3-5.

Brief descriptions are presented of one drawing by Pokrovskiy which appeared in the article entitled "Intercontinental Missiles and Aviation" and 3 illustrations which appeared in the article "A Look into the Future."

Chemical Engineering

CHEMICAL INDUSTRY OF COMMUNIST CHINA: SELECTED TRANSLATIONS AND EXTRACTS. 17 Mar 59, 16p. JPRS: 597-D.
Order from OTS $0.50 59-11466

Trans. of Hua-hsueh Kung-yeh (Chinese People's Republic) 1958, no. 14, p. 1-4, 7-8, 17, and 19.

Contents:
Unerring political leadership, better future of chemical machinery production, and success of the leaping chemical industry, by Chang Chen, Deputy Director of the Department of Chemical Industry (A recorded speed given before the National Chemical Machinery Operational Conference of 23 September 1958, sponsored by the Department of Chemical Industry)
Tien Tsin chemical industry joins steel refinery program, by Yung-hseng Chen
The leaping Hu-nan chemical industry, by the Bureau of Chemical Industry, Hunan Province
Method of metallic sodium production used by the Chunking Dyestuff Plant, by Shao-lin Weng, Szechuan Operation Section, Department of Chemical Industry
Contact sulfuric acid by local method, by the local state-operated Sheng-cheng Hsien Synthetic Fertalizer Plant
Local method [of] nitric acid preparation without using stainless steel and platinum, by the Shanghai Chemical Laboratory

CHEMICAL INDUSTRY IN COMMUNIST CHINA: SELECTED TRANSLATIONS AND EXTRACTS. 2 Apr 59, 38p. JPRS: 1399-N.
Order from OTS $1.00 59-13324

Trans. of Hua-hsueh Kung-yeh (Chinese People's Republic) 1958, no. 12, p. 2-3, 11, 21-22; no. 13, p. 1-2, 7-9, 12-13, 18-20, 23-24, 28-29 and 31-32.

Contents:
To support iron and steel production with maximum effort is the major task of the chemical industry, by the editorial staff
Some problems for scientific research and design work by the chemical industry, by the editorial staff
Native method and self reliance (Extracts from a speech by Ch'ang-an Ting, Party Branch Secretary, Ch'ang-chou Agricultural Insecticides Plant, to a production conference in Ch'ang-chou)
Manufacture of chloral from alcholo, by the Shanghai Work Team, Ministry of Chemical Industry
Rapid Advances by China's Chemical Industry, [unsigned] feature article
Chemical enterprises actively producing iron and steel, by Tsu-yen Yu
Small-scale native method (Extract from article by Wen-kuang Ts'ai)
Accelerate construction of "backbone" chemical plants, by Fu-ying Kao
Chemical industry leaps resolutely forward, by Office One, Chemical Industry Design Institute
It is a school and factory, by Kuei-fu Ch'en
Outline for the development of the chemical industry in Wuhsi in the second half of 1958, by the Wu-hsi Light Industry Bureau
The fiber hydrolysis industry must be developed, by Chih Chu
Chemical industry exhibition, by Shih Liu
Recommended vitrified enamel repair method, by Ying Shih

COMMUNIST CHINA CHEMICAL INDUSTRY: SELECTED TRANSLATIONS AND EXTRACTS FROM HUA-HSUEH KUNG-YEH. 13 Apr 59, 60p. JPRS: 1471-N.
Order from OTS $1.75 59-13418

Trans. of Hua-hsueh Kung-yeh (Chinese People's Republic) 1959, no. 1, p. 5-7, 14-15, 19, 36-39, 42-44, 44-46, 54-55, and 62-64.

Contents:
Continue the expansion of the mass movement for fertilizer collection and production, Develop native chemical fertilizer production
Liberate the mind and mobilize the masses for engaging in the high-productivity movement in a big way, by Ming Chao
Mass movements must be extensively carried out in large enterprises, by Yuan-ch'ing Ch'u
Exert great efforts to overcome all difficulties and actively develop the chemical and petroleum industries of Hunan province, by Hsin-shan Tung
Engage in a mass movement and develop the chemical industry by walking on two legs, by T'an Chang
The present condition and future development of the Sinkiang chemical industry, by Yu-ch'i Han
All trades and professions can manage chemical industry, by Kuo-chih Ma
Design and production of sulphuric acid by the local-style contact process, by the Editorial Department, Hua-hsueh Kung-yeh
Manufacture of complete sets of chemical equipment using non-metallic materials, by the Technical Office, Institute of Chemical Industry Designing

HUA-HSUEH KUNG-YEH: SELECTED TRANSLATIONS AND EXTRACTS. 11 May 59, 99p. JPRS: 1560-N.
Order from OTS $2.25 59-13496

Trans. of Hua-hsueh Kung-yeh (Chinese People's Republic) 1958, no. 15, p. 2-5, 8-9, 15-16, 18, 21, 25-30; no. 16, p. 6-9, 14-15, 26-28, and 31.

Contents:
Soda ash production by native methods, by the Ningpo Municipal Industrial Research Institute
Soda ash production from ammonium bicarbonate by native methods, by Tung Shou
Nitric acid plant using native methods, by Ch'uan-feng Ch'iao, Tsung-lin Chang, Hsich-chang Ch'en, and Chun-nan Miao
Production of polyvinyl chloride plastics from ethyl alcohol, by Yin-shen Shen
Successful production of ethylene glycol from ethyl alcohol, by the Ethylene Glycol Trial Manufacturing Team, Peiping Chemical Research Institute
Comprehensive utilization of rice husks, by Hsi-hsun Hsi
Looking back at the production of the Kirin Chemical Industry Company during the past year; Commemorating the forty-first anniversary of the October Revolution of the Soviet Union, by the Kirin Chemical Industry Company
Soviet experts are our friends and teachers, by Fei Li
Genuine friendship, unselfish assistance, by the Kirin Carbide Factory
A chemical industry which serves the "generals' and the "vanguards", [unsigned]: (Iron and steel, machinery and grain are the "generals", electric

power and communication are the vanguards".)
"Vanguard officer" opening a path for the "general": Kirin Chemical Industry Company in large-scale effort to save and generate electricity, [unsigned] bulletin dated 1º October 1958
Varied ways and means of using electric power in production; number four rubber plant starts movement to fight "drought" in electric power, [unsigned] bulletin
The development of technology in China's rubber industry and our future tasks, by Yuan Lin
What chemical products are required by the "generals and the "vanguards"? [unsigned]
A great happy event: buna rubber successfully trial manufactured by the Institute of Chemical Industry, by Tzu-chin Wu
Pushing the "small, native-style group" movement in the chemical industry to a new stage, by the Production Dept., Ministry of Chemical Industry

ZHURNAL PRIKLADNOY KHIMII (USSR) 1959, VOL. 32, NO. 4, P. 705-940 (Journal of Applied Chemistry). [1959] 1v. SOV-80-32-4-(1-47)/47.
Order from OTS $0.90, $5.00/6 mo. PB 141 076T-4
Foreign $1.15, $6.50/6 mo.

Consists of abstracts in English.

Aliyev, V. and Markevich, S.
THE WAY TO TECHNICAL PROGRESS [AND] INEXHAUSTIBLE POSSIBILITIES (Put' k Tekhnicheskomu Progressu [and] Neyscherpayemyye Vozmozhosti) tr. by S. E. [1958] [8]p. H-2485 A and B.
Order from OTS $0.50 59-11945

Trans. from Bakinskiy Rabochiy (USSR) 1958, 15 May.

Bahmuller, O.
TWENTY YEARS OF OFFLEBEN LOW-TEMPERATURE CARBONIZATION WORKS. THE CHEMICAL PLANTS OF THE CARBONIZATIONS WORKS. [1959] 20p. (6 figs. omitted) 3 refs.
Order from SLA mi$2.40, ph$3.30 59-17463

Trans. of Braunkohle, Warme und Energie (West Germany) 1957, v. 9 [no. 23/24] p. 486-493.

The discussions show the development of the chemical side of the Offleben Low-Temperature Carbonization Works of the Brunswick Coal Mines, Helmstedt. On the one hand, they show that the quality and also the quantity of the liquid products, light oil and middle oil, were substantially increased by introducing completely new methods of operation. On the other hand, they show that the waste-water question was solved as well as the economy improved by taking up the production of phenols. (Extracted from author's summary).

Bernsteyn, V. A. and Matsenok, E. A.
HOW THE NATURE OF DIASPORE IN THE BAUXITE ORES DETERMINES THE GRADE OF ITS EXTRACTION BY LEACHING (Vliyaniye Prirody Diaspora v Boksitakh na Stepen' ego Izvlecheniya pri Vyshchelachivanii). [1959] [11]p. (2 figs. omitted) 4 refs.
Order from LC or SLA mi$2.40, ph$3.30 59-16371

Trans. of Tsvetnyye Metally (USSR) 1958 [v. 31] no. 3, p. 55-60.

Vein diaspore was isolated from other minerals in which it occurs in the form of small plates; finely crystalline flaky diaspore was obtained from bauxite by the method developed by M. F. Kompaneyts (VAZ). The former contained 82.6 and the latter 72.7 to 76.1 or 64.9% Al_2O_3 depending on which of two bauxites were its source. A. M. Dmitriyeva (VAMI) made a crystallo-optical study of the two bauxites. The vein diaspore had a lower specific surface (by Tovarov's air-flow resistance method) than similarly sized flaky diaspore. This is attributed to the slower solution of the vein fraction. Leaching experiments were carried out with heating rates (223°C in the autoclaves in 8 to 10 minutes) resembling those in full-scale installations and continued for 2 or 3 hours. They showed mixtures of the two forms of diaspore to dissolve more slowly than either taken single under the same conditions. It is suggested that specific surface rather than size grading of bauxite is the important criterion for leaching and that statistical data should be assembled for selecting optimal values.

Bezhanishvili, V.
THE PROPERTIES OF DRY-QUENCHED COKE. A BRIEF DESCRIPTION OF THE INSTALLATION FOR DRY QUENCHING OF COKE. [1959] 6p. 9 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-18328

Trans. of Stal' (USSR) 1939, v. 9, no. 12, p. 18-20.

Dogadkin, B. A., Skorodumova, Z. V., and Kovaleva, N. V.
REACTION OF SULFUR AND CARBON BLACK [O Khimicheskom Vzaimodeystvii Sery s Sazhey]. [1959] [22]p. 7 refs.
Order from LC or SLA mi$2.70, ph$4.80 59-17599

Trans. of *Kolloidnyy Zhurnal (USSR) 1958, v. 20 [no. 3] p. 272-278.

The amount of sulfur chemically bound by heating in a hydrocarbon medium with different carbon blacks is the greater the lower the content of oxygen in the carbon black. Commercial carbon blacks form the following series according to the amount of sulfur bound per unit of surface: channel < furnace < thermal < lamp. The fractional area occupied by sulfur changes from 0.06 m^2/m^2 (channel black) to 0.35 m^2/m^2 (lamp black). Elimination of oxygen from the surface of carbon blacks by hydrogenation or heating in vacuum at temperatures not over 800°C increases chemisorption of sulfur on the surface of carbon blacks. Oxidation of carbon black decreases chemisorption of sulfur. Heating of carbon black at temperatures over 900°C in vacuo or in a hydrogen atmosphere decreases chemisorption of sulfur. No evolution of hydrogen sulfide was observed by chemical reaction of sulfur with carbon blacks. Sulfur is bound on the surface of carbon blacks in the form of stable compounds unable to undergo isotope exchange with elemental sulfur at

130°C. The ability of channel carbon black to adsorb water vapor does not change by addition of sulfur. It is concluded that sulfur is added to the carbon black, principally to the active areas of carbon surface. (Author's conclusions)

Fontein, F. J.
THE STATE OF THE DEVELOPMENT AND APPLICATION OF HYDROCYCLONES, tr. by J. B. Sykes. 1955 [12]p. 13 refs. A. E. R. E. Lib/Trans. 617.
Order from SLA mi$2.40, ph$3.30 59-17532

Trans. of Chemie-Ingenieur-Technik (West Germany) 1955, v. 27, no. 4, suppl, p. 190-192.

Gibello, H.
POLYVINYLACETAL RESINS. [1959] 5p. 4 refs. R.T.P. Trans. no. 2421.
Order from SLA mi$1.80, ph$1.80 59-17679

Trans. of Kunststoffe (Germany) 1942, v. 32, no. 6, p. 180-182 (digest of Revue Générale du Caoutchouc (France) 1941, v. 18, p. 198-208 and p. 223-235)

Gogitidze, T. A. and Plaksin, I. N.
THE EFFECT OF OXIDATION OF THE SURFACE OF CERTAIN BLACK COALS ON THEIR FLOATABILITY. [1959] [7]p. 6 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-18339

Trans. of Akademiya Nauk SSSR. Otdeleniye Tekhnicheskikh. Izvestiya, 1956, no. 11, p. 77-81.

Hara, N[obuyoshi].
TAMIS MOLECULAIRES. LEURS PROPRIETES ET APPLICATIONS. (Molecular Sieves) tr. by E. Hara. 15 May 59 [10]p. 31 refs. Trans. No. X 134 (text in French).
Order from SLA mi$1.80, ph$1.80 CEA-tr-X134

Trans. in French of Kagaku to Kogyo, Tokyo (Japan) 1957, v. 10, no. 2, p. 63-69

Various industrial applications of zeolites are enumerated, including the drying of gases, purification of natural gas, dehydration of oils for transformers, purification of liquid propane, ion exchange, etc.

Hilbner, G[erhard].
UN NOUVEAU FLACON-LAVEUR DE SÉCURITÉ, tr. by B. Moreau. 15 May 59 [5]p. 2 refs. Trans. no. A 574 (text in French).
Order from SLA mi$1.80, ph$1.80 CEA-tr-A574

Trans. in French of Chem[iker] Zeitung (East Germany) 1957, v. 81, no. 17, p. 569.

A device is described which can be used in cases in which a mixture of 2 gases is to be brought into the presence of a catalytic agent, with exclusion of air. The apparatus, which is simple to operate, affords observation of the gas flow towards the catalyst, and at the same time washes out residual impurities and indicates variations of pressure.

Karavayev, N. M., Sevast'yanov, Yu. L. and others.
PYROLYSIS OF COAL WITH HIGH-FREQUENCY CURRENT. [1959] [6]p. 7 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-18369

Trans. of Akademiya Nauk SSSR. Doklady, 1951, v. 77, no. 5, p. 871-874.

A study was made of coal pyrolysis by dry distillation with a high-frequency current. In other words coal was pyrolyzed not by heating from within, but as a dielectric process of heating throughout the mass of material. Investigations were made in the temperature range from +10 to +1,000 degrees. Particular attention was directed toward the semicoking temperatures (480-570°). Solid, liquid, and gaseous products were subjected to chemical and technological analysis; in the coke and semicoke determinations were made of the content of C, H, ash, sulfur, moisture, volatile components, and calorific value; in the tar the content of bases, acids, phenols, asphaltenes, paraffines, and water was measured; and in the gas the content of H_2, CH_4, CO, CO_2, O_2, and N_2 was determined. It was found that, according to the data of the methods used for investigation, the products of dielectric semicoking and coking differ from the products of ordinary thermal coking in composition and yield. (Extracted from the report)

Kargin, V. A., Kovarskaya, B. M. and others.
BLOCK-POLYMER FROM PHENOL-FORMALDEHYDE RESINS AND NITRILE RUBBER (Blok-Polymer na Osnove Fenol'no-Formal'degidnoy Smoly i Nitril'nogo Kauchuka). [1959] [6]p. 9 refs. (foreign text included).
Order from LC or SLA mi$1.80, ph$1.80 59-17787

Trans. of Akademiya Nauk [SSSR]. Doklady, 1957, v. 112, no. 3, p. 465-466.

A method was used that brings about the destruction of the polymer by subjecting it to intensive mechanical action.

Klassen, V. I. and Kochanova, L. A.
INTERACTION OF POLAR FLOTATION REAGENTS WITH COALS. [1959] [7]p. 8 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-18345

Trans. of Akademiya Nauk SSSR. Otdeleniye Tekhnicheskikh Nauk. Izvestiya, 1956, no. 7, p. 121-123.

The interaction of alcohols with coal was studied and its possible application to coal flotation was shown theoretically (IGDAN) and practically (Institute on Coal Beneficiation, Donetz Industrial Institute, IGDAN, and others). Such research requires special methods, allowing quantitative evaluation of the attachment of reagents to coal and waste rock, which also changes the flotation properties of the powder. Considering the complications of radioactive isotopes and other chemical methods for characterizing the attachment of reagents to grain surfaces as well as in pores, and because of the difficulty of getting a large assortment of "marked" reagents, the method of measuring the electrokinetic potential was used. (Extracted from the report)

Kolodtsev, K. I. and Orel'chenko, I. F.
HEARTH METHOD OF COAL GASIFICATION FOR POWER PRODUCTION PURPOSES. [1959] [21]p. 4 refs.
Order from LC or SLA mi$2.70, ph$4.80 59-18342

Trans. of Vsesoyuznyy Teplotekhnicheskiy Institut. Izvestiya (USSR) 1952, no. 8, p. 12-18.

The experimental verification of the hearth method of solid fuel gasification has shown a number of advantages in the new techniques of the process. With the depth of the hearth between 300 and 350 mm, high and stable rates of air blast gasification of coke have been obtained within a wide range of intensity rates, reaching $CO/(CO+CO_2)$ 0.82. The maximum values of charges attained experimentally were 1,350 km/m^2hr according to the fuel, and over 9 mgcal/m^2hr according to the heat liberation per unit volume of combustion space, which attainment is far from being a limit to a further improvement. Due to the high capacity, concentrated hearth of heat liberation, the temperature of the core of burning has reached 1,700°C even with the cold air blast; such a temperature guarantees the most favorable conditions for melting and draining the slag, the output of which in individual cases reached as much as 96%. The study of various methods of sharp blasting arrangement suggests that the most promising variant is a combination of the lower central nozzle and the adjustable slag vent. The method presented here can be used for converting the existing industrial ovens and furnaces to gas fuel, and also for designing the new types of high efficiency part-gas furnaces. The hearth method for power production holds a high promise when used in combination with the "boiling" layer, or the cyclone furnace, thus allowing combustion of ordinary unsorted fuels. Gas turbines may be another area where a gas generator with a fluid slag removal can be used. In the latter case, because of higher pressure applied in the process, it can be organized with the greatest efficiency, and the smallest size of the installation. (Author's conclusions)

Kuz'minykh, I. N., Aksel'rod, L. S. and others.
COEFFICIENTS OF MASS TRANSFORMATION ON HORIZONTAL PERFORATED PLATES AT VARIOUS GAS SPEEDS. 25 Aug 59, 12p. 5 refs. JPRS: L-937-N.
Order from OTS $0.50 59-13831

Trans. of Khim[imicheskaya] Prom[yshlennost'] (USSR) 1954, no. 2, p. 86-89.

Evaporation of water and desorption of oxygen from an aqueous solution were used as the means of studying mass transfer through the gaseous and liquid phases at divers air speeds, on sieve plates. The resistances of the dry and wetted plates were measured. Throughout the entire investigated range of gas velocities (up to 1.8 meters per second) the coefficient of mass transfer through the gaseous phase tends to increase proportionally to gas speed to the degree of 0.85, which is a great argument in favor of applying sieve-plate bubbling in the processes whose speed is restricted by the gaseous-phase resistance. The coefficient of mass transfer through the liquid phase reaches its maximum at a gas speed of 0.5 or 0.6 meters per second; when the gas speed in the column is raised to 1 meter per second, that coefficient decreases by half and at any further increase in gas speed it is no longer affected by that speed. With regard to processes restricted by the resistance of the liquid phase, bubbling can be applied successfully only at low gas speeds in the column, when a froth regime is present on the plates. At gas speeds of 1 meter per second and more, the froth layer on the sieve plates is absent and instead there exists the regime of gaseous jets and spray. At a fixed free cross-sectional area (6.07 per cent) the changing of the diameter of orifices (0.9 to 6.0 millimeters) affects little the mass transfer and plate resistance, but it affects strongly the threshold of downspout-collapse of the fluid through the orifices. During bubbling on sieve plates the ratio of the heat transfer coefficient to the mass transfer coefficient approximately equals the heat capacity of the moist gas. (Author's conclusions)

Le Roux, P.
THE TREATMENT OF TARS AT THE MARIENAU PLANTS. [1959] [25]p.
Order from SLA mi$2.70, ph$4.80 59-17472

Trans. of Goudron pour Routes (France) 1958, June, p. 12-25.

Morgenstern, G.
RETARDATION AND ACCELERATION OF THE DECOMPOSITION OF SODIUM AMALGAM IN THE INDUSTRIAL ELECTROLYSIS OF ALKALINE CHLORIDE (Über die Verzögerung und Beschleunigung der Zersetzung von Natriumamalgam bei der Technischen Chloralkalielektrolyse). [1959] [6]p. (2 figs. omitted). No. 241.
Order from SLA mi$1.80, ph$1.80 59-17916

Partial trans. (p. 117-121) of Zeitschrift für Anorganische Chemie (East Germany) 1953, v. 272, no. 14, p. 111-121.

The decomposition of amalgam in the industrial electrolysis of alkaline chloride is retarded by impurities such as Cu, Sn, Zn and above all Pb, by the formation of surface layers. On the other hand, by the decrease of the transition resistance amalgam-graphite by means of good-conducting connection between graphite and amalgam via iron, a considerable increase of the amalgam decomposition can be attained. (Author)

Novikov, M.
AT THE ALL-UNION INDUSTRIAL EXHIBITION. AT THE CHEMICAL INDUSTRY PAVILION (Na Vsesoyuznoy Promyshlennoy Vystavke. V Pavil'one "Khimicheskaya Promyshlennost") tr. by Andrew Levchenko, Jr. [1959] [5]p. (1 illus. omitted). H-2949 C.
Order from OTS $0.50 59-21097

Trans. from Krasnaya Zvezda (USSR) 1958, 12 June.

Plaksin, I. N., Klassen, V. I. and Berger, G. S.
ON THE KINETIC EQUATIONS OF THE FLOTATION PROCESS. [1959] 8p.
Order from LC or SLA mi$1.80, ph$1.80 59-16375

Trans. of Tsvetnyye Metally (USSR) 1956, v. 29, no. 4, p. 22-24.

The present treatement of flotation kinetics is based on the law of mass action.

Plurien, Pierre and Parisot, Jean.
POROUS MEMBRANES AND PROCEDURES FOR THE MANUFACTURE OF THE MEMBRANES. [1959] 6p.
Order from LC or SLA mi$1.80, ph$1.80 AEC-tr-3773

Trans. of French patent 1 172.527, gr. 12, cl. 2, requested 22 May 56, granted 20 Oct 58, pub. 11 Feb 59.

The present invention has for its subject porous membranes, as well as, the procedure for the fabrication of these membranes with the goal of obtaining diffusion barriers with high resistance to chemical corrosion. The fabrication procedure is characterized essentially by the following: a metallic gauze, resistant to corrosion, is covered with a certain quantity of moist paste obtained by the flocculation of an emulsion of polytetrafluoroethylene with an appropriate coagulating agent. The metallic gauze thus covered is then submitted to a fixing treatment and a treatment to eliminate the coagulating agent. (Author's summary)

Sevast'yanov, Yu. L., Dolgopolov, N. N. and others.
CHANGES IN ELECTRICAL CHARACTERISTICS UPON THERMAL AND DIELECTRIC HEATING OF COAL. [1959] [5]p. 6 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-18330

Trans. of Akademiya Nauk SSSR. Doklady, 1950, v. 74, no. 4, p. 755-757.

With thermal heating beginning at a temperature of 20 degrees the resistance of coal drops gradually and at 400 degrees equals around one megohm. When heated in a high-frequency field beginning at 20 degrees coal is suddenly transformed from a dielectric into a conductor at 240-270 degrees, whereupon its resistance drops to a few ohms and, with further heating up to 400 degrees, falls to around one ohm. Above 400 degrees the regular drop in resistance continues. When heated with gas the tangent of the angle of loss in the coal (which is the inverse of the quality) rises up to 100 degrees, whereupon it drops; after 300 degrees it again begins to rise. With heating in a high-frequency field the tangent of the angle of loss was measured up to 240-270, and at higher temperatures was calculated. When heated with a gas burner the dielectric constant of coal varies within small limits (from 1.5 to 2.5), such that it rises up to 100 degrees and falls after that temperature, asymptotically approaching 1.5. The mechanisms of transformation of coal into the products of pyrolysis with thermal heating and dielectric heating are completely different, as shown by the changes in the basic electrophysical parameters. (Extracted from the report)

Sustmann, Heinz and Weinrotter, Ferdinand.
HIGH-PRESSURE HYDROGENATION OF SEMI-COKES OF BROWN COAL AND HARD COAL. [1959] 24p. 6 refs.
Order from SLA mi$2.70, ph$4.80 59-17460

Trans. of Brennstoff-Chemie (Germany) 1941, v. 22 [no. 20] p. 229-[236] (Reprinted in Gesammelte Abhandlungen zur Kenntnis der Kohle (Germany) [1929] v. 13, p. 160-173).

Trawinski, H.
THE HYDROCYCLONE AS AN AUXILIARY APPARATUS FOR THE REFINEMENT OF RAW MATERIALS, tr. by F. Hudswell. 1955 [30]p. 58 refs. A. E. R. E. Lib/Trans. 605.
Order from SLA mi$2.70, ph$4.80 59-17522

Trans. of Chemie-Ingenieur Technik (West Germany) 1953, v. 25, no. 6, p. 331-341.

The hydrocyclone has made its appearance as an apparatus equal in value to the centrifuge. The functional differences and the limits of the ranges of application are elucidated for both types of centrifugal separator. The constructional development of the hydrocyclone is shown. A dimensionless characteristic quantity for the separation is introduced in order to embrace all the empirical relations concerning the particle sizes of separation in cyclones. The functioning of a separator can be judged from the Rammler-Bennett net. Finally, a report is made on operational problems of the hydrocyclone and on the applications which have been attempted to date. (Author)

Trawinski, H.
MULTIPLE HYDROCYCLONES OF THE LATEST TYPE, tr. by J. B. Sykes. 1955 [7]p. 8 refs. A. E. R. E. Lib/Trans. 618.
Order from SLA mi$1.80, ph$1.80 59-17534

Trans. of Chemie-Ingenieur-Technik (West Germany) 1955, v. 27, no. 4, suppl, p. 193-194.

Tyutyunnikov, Yu. B.
HIGH-FREQUENCY SINTERING OF COAL PREFORMS DIELECTRIC HEATING (Primeneniye Tokov Vysokoy Chastoty dlya Nagreva Ugol'nykh Formovok v Stadii Spekaniye). [1959] [10]p. 6 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-18542

Trans. of Koks i Khimiya (USSR) 1957, no. 12, p. 22-26.

The possibility of using high-frequency currents (dielectric heating) for heating coal preforms in the sintering stage has been demonstrated. It has been established that in dielectric sintering the heating of coal preforms, at temperature increases between 380° and 480° C, is uniform, without a temperature gradient being built up along the cross section of the preform. In cases of fast dielectric sintering of coal preforms, their optimum molding pressure is between 2 and 3 kg/cm^2. The maximum rate of temperature increase in preforms heated dielectrically in the sin-

tering stage must not exceed 33° to 40° C per minute, since higher rates will result in the reduction of the mechanical strength of the preforms. Coal preforms heated dielectrically at a rate of temperature increase not exceeding 33° to 40° C per minute show a higher mechanical strength than preforms heated by the oven method at a rate of 1.5° C per minute. At the Kharkov plant, continuously fed coal preforms were dielectrically heated up to 485° C at the rate of 33° C per minute. The preforms heated by this method showed greater mechanical strength than preforms heated by the oven method at the rate of 1.5° C per minute. (Author)

Electrical and Electronic Engineering

AUXILIARY POWER SUPPLY CIRCUIT FOR DIRECT CURRENT MAGNET, tr. by J. C. Levy. 10 July 59, 7p. (4 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-18794

Trans. of Swiss patent 252,012, cl. 112, appl. 3 Dec 46, registered 30 Nov 47, pub. 16 Sep 48, by Patent- und Versuchs-Anstalt, Vaduz, Liechtenstein.

The circuit is characterized in that the magnet is switched in to a holding circuit which is insufficient to pull over the armature, and in that there is associated therewith an energy accumulator through the variation of whose state of charge the holding current is transiently increased to the (minimum) working current for attraction of the armature.

NAUCHNYYE DOKLADY VYSSHEY SHKOLY. ELEKTROMEKHANIKA I AVTOMATIKA (USSR) 1958, NO. 1, P. 4-272 (Scientific Reports of Higher Schools. Electromechanics and Automation. [1959] 1v. SOV-161-58-1-(1-33)/33.
Order from OTS $0.70, $2.50/year PB 141 102T-1
Foreign $0.95, $3.50/year

Consists of abstracts in English.

PIEZO-ELECTRIC MICROPHONE OF SMALL DIMENSIONS. Consists only of abstract by E. L. [1959] [1]p. 1 ref. R. T. P. Trans. no. 2507.
Order from SLA mi$1.80, ph$1.80 59-17676

Trans. of V[erein] D[eutscher] I[ngenieure]. Z[eitschrift] (Germany) 1943, v. 87, no. 25/26, p. 406.

The Telefunken G. m. b. H. have developed a microphone utilizing the high piezo-electric effect of Rochelle salt (Z. VDI, Vol. 85/1941, p. 677), of such small dimensions that the diameter of the (spherical) microphone box is only 48 mm. and it can thus conveniently be carried in the hollow of the hand. The crystal member coupled to the microphone membrane contained within the box, is protected by a damped suspension system from outside disturbances. The directional characteristic of the microphone is nearly spherical, so that it responds with almost equal sensitivity in all directions. The frequency curve is exceedingly steady over the range from 50 to 10,000 cycles and rises slightly at higher frequencies, compensating for pitch losses in amplifier and loud speaker. In spite of its small dimensions, the microphone has a fairly high sensitivity of 1 millivolt/microbar; it works without a voltage supply, and up to 200 m. feeder cable can be interposed between the microphone and the input amplifier stage. (The document is presented here in its entirety)

THE SPIRATRON. [1959] [2]p.
Order from LC or SLA mi$1.80, ph$1.80 59-18767

Trans. of unidentified mono. (brochure) from All-Union Industrial Exhibition, Moscow, 1958.

"In the Institute of Radio and Electronics of Ac. Sc. USSR, under the direction of Cand. Tech. Science Z. S. Chernov in collaboration with P. S. Voronov, G. M. Mautrova, V. V. Faikin, T. I. Izyumova and research workers S. N. Zasosov, N. I. Vorob'ev and A. L. Platonova, a system of centrifugal-electrostatic focusing has been evolved, and based on this, V. H. F. and U. H. F. broad band amplifiers have been made and given the name "spiratron." In comparison with the usual T. W. T., the spiratron has considerable advantages: it requires no power for focusing the electron beam, its weight is reduced by ten to a hundred times, there is no need to adjust the position of the valve in the focusing field, thus greatly facilitating conditions for using and replacing valves; finally, in a spiratron the cathode is protected from the destructive action of ion bombardment, and this fact greatly increases the life of the valve. The testing of spiratrons in the I. R. E. of the Ac. Sc. USSR showed that such amplifiers could be successfully developed for centimetric and metric wave bands. Spiratrons provide a power amplification of high-frequency signals of between 100 and 10,000 times. The spiratron has a very wide bandwidth--a band pass of frequencies up to 2-3 octaves (e. g., a spiratron fitted on a stand amplifies a signal up to 100-300 times over the band from 10 to 20 cm). It has a very high electronic efficiency." (Over half of the translation is included in the above extract)

TRANSMITTER FOR TESTING THE QUALITY OF TELEVISION RECEIVERS, tr. by J. C. Levy. 18 Mar 59, 10p. (6 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-14705

Trans. of Swiss patent 233,313, cl. 120g, appl. 13 Aug 40, registered 15 July 44, pub. 16 Oct 44 (Priority: Germany, 3 June 39) by Opta Radio Aktiengesellschaft, Berlin-Steglitz.

The transmitter is characterized in that, in addition to the normal horizontal line repetition pulses and the picture (frame, field) repetition pulses, the said transmitter is suited to generate pulses whose duration is equal to that of an image point and whose frequency is equal to an integral multiple of the horizontal line scanning frequency.

VESTNIK ELEKTROPROMYSHLENNOSTI (USSR) 1959, V. [30] NO. 1, P. 1-80 (Herald of the Electrical Industry). [1959] 1v. SOV-110-59-1-(1-28)/28.
Order from OTS $0.70, $4.00/6 mo. PB 141 107T-14
Foreign $0.95, $5.50/6 mo.

Consists of abstracts in English.

Arai [M].
AMELIORATIONS DU MULTIVIBRATEUR A FREQUENCE VARIABLE, tr. by E. Hara. 3 Apr 59 [31]p. 13 refs. Trans. no. X 126 (text in French).
Order from SLA mi$3.00, ph$6.30 CEA-tr-X126

Trans. in French of [Denki Tsushin Gakkai Zasshi] (Japan) 1957, v. 40, no. 11, p. 1177-[1184].

Baatz, H., Böcker, H. and Özkaya, M.
THE CALIBRATION OF SURGE VOLTAGE MEASURING CIRCUITS BY MEANS OF A SQUARE WAVE DISCHARGE IMPULSE (Die Eichung von Stossspannungsmesskreisen Mittels Rechteck-Entladestoss) tr. by D. A. Sinclair. 1959, 29p. 10 refs. Technical Trans. 811.
Order from NRCC NRCC TT-811

Trans. of ETZ Elektrotech[nische] Z[eitschrift] Augsgabe A. Zentralblatt fur Elektrotechnik] (Germany) 1958, v. 79, no. 16, p. 553-560.

The time-dependent voltage error in the oscillogram of a surge voltage measuring circuit can be determined by measuring the natural frequency and the time constants. This calibration can be carried out with an almost ideal square wave impulse. It is suggested here that such an impulse should be produced by means of the steep voltage collapse of a compressed gas spark gap connected to the input of the testing circuit.

Böhm, Zdenek.
AMPLIFICATION ELECTRONIQUE DE TENSION POUR L'ENREGISTREMENT INDIRECT ENCHROMATOGRAPHIE DES GAZ, tr. by Spitz. 10 June 59 [9]p. 5 refs. Trans. no. X 140 (text in French).
Order from SLA mi$1.80, ph$1.80 CEA-tr-X140

Trans. in French of Chem[icke] Listy (Czechoslovakia) 1958, v. 52, no. 2, p. 359-360.

An amplifier designed by the Czechoslovak firm Metra is described. The device can be adapted to any charge, and it can be used in amplifying slow variable continuous tensions. Internal resistance is 2400 ohm.

Druzhkin, L. A.
COSMIC TELEVISION (Kosmicheskoye Televideniye). 24 Apr 59 [5]p. (2 figs. omitted) AF 1255742.
Order from LC or SLA mi$1.80, ph$1.80 59-16340

Trans. from Sovetskiy Flot (USSR) 1959, 20 Mar, p. 2.

Answers are summarized which were given by L. A. Druzhkin to the following questions put to him by a correspondent of Sovetskiy Flot: (1) Is it possible to use the satellites for TV purposes and if yes what advantages may be expected from that method? (2) How do you intend to realize transmissions from the satellites? (3) How long would the TV equipment of the satellite be able to operate normally? (4) Is it possible to carry out TV transmissions not only from Moscow but from other cities also? (5) How do you intend to solve the problem of power supply in the satellite TV equipment? (6) Does there exist a further possibility of expanding the service of TV satellites in order to make Moscow transmissions available to viewers in the Western hemisphere and vice versa? (7) What perspectives in the development of cosmic TV may be expected in the future? (8) Would it be possible to observe the pictures transmitted from space ships with regular TV receivers?

Hölzler, Erwin.
METHOD FOR MEASURING THE GROUP DELAY OF 4-TERMINAL NETWORKS, tr. by F. H. B. 26 Mar 59, 7p. (2 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-14699

Trans. of German patent 701, 423, cl. 21 a, gr. 36 13, pat. from 6 June 37, pub. 16 Jan 41, by Siemens & Halske, Akt.-Ges., Berlin-Siemensstadt.

A method is presented for measuring the group delay ($da/d\omega$) of 4-terminal network in which two closely neighboring frequencies that have originated by modulation of a variable frequency with a frequency invariable with respect to the measuring frequency are passed over the object to be measured, especially in transmission systems. The method is characterized in that these two frequencies are adjusted to an amplitude which is constant at the outlet of the 4-terminal network to be tested and are modulated with a voltage of such frequency that two of the originating side frequencies coincide and that the amplitude of the voltage resulting therefrom is used as measure for the amount of the delay. The two neighboring frequencies are obtained by modulation of a variable measuring frequency with a carrier frequency low in relation to the measuring frequency. The latter is used as carrier frequency also in the modulation of the receiver but shifted by 90^{o} in phase.

Jellonek, A.
MEASUREMENT OF THE SELF-CAPACITANCE OF INDUCTANCE COILS. [1959] 31p. 26 refs.
Order from MDF $12.50 MDF J-103

Trans. of Rozprawy Elektrotechn[iczne] (Poland) 1958, v. 4, no. 3, p. 287-317.

A procedure is proposed which allows reasonably accurate results to be obtained by the use of commerical instruments (Q-meters, for example). Also a method is given for computing the most probable value for a large number of measured points, in which case the accuracy obtained can be even higher than the nominal accuracy of the capacitance or frequency standard.

Kiyasu, Zenichi.
A METHOD OF DESIGNING DELAY CIRCUITS. [1959] 40p. 29 refs.
Order from SLA mi$3.00, ph$6.30 59-17476

Trans. of Denki Tsushin Gakkai Zasshi (Japan) 1943, v. 26, Aug. p. 598-610.

Krasilshchikov, M.
SWITCHING OF RADIOTELEPHONE CHANNELS (Kommutatsiya Radiotelefonnykh Kanalov). 4 Mar 59 [5]p. AF 1255602.
Order from LC or SLA mi$1.80, ph$1.80 59-16330

Summary trans. of Voyennyy Svyazist (USSR) 1958, [v. 16] no. 6, p. 27-29.

Kuhrt, Friedrich and Maaz, Karl
MEASUREMENT OF HIGH DIRECT CURRENTS WITH HALL-EFFECT GENERATORS (Messung Hoher Gleichströme mit Hallgeneratoren) ed. by Margaret W. Raven, tr. by Lloyd G. Robbins, Science Translation Service. Feb 58 [15]p. 6 refs. STS-277; Bureau of Ships Translation 648.
Order from LC or SLA mi$2.40, ph$3.30 59-12039

Trans. of ETZ Elektrotechnische Zeitschrift. (West Germany) 1956, v. 77, no. A 14, p. 487-490.

By the development of Hall-effect generators (59-12033) the possibility is provided of depicting high dc currents in a Hall voltage. With a device which consists of a two-part iron yoke with a Hall generator mounted in each air gap, high dc currents can accordingly be measured and ampere-hours can be recorded. Such a measuring device has the advantage of simplest assembly, a strictly linear recording over the entire measuring range, and moreover is fully independent of external fields, of return conductor position, and of nearby iron masses. The indicated measuring accuracy with a high-current measuring device for 15 kiloamperes nominal current falls within an error of ±0.2% up to temperature variations of ±5° at the installation point of the yoke. (Author's summary)

Kuhrt, Friedrich and Braunersreuther, Eberhardt
MEASUREMENT OF THE FIELD PATTERN IN THE AIR GAP OF A DC MOTOR WITH THE AID OF THE HALL EFFECT (Messung des Feldverlaufes im Luftspalt eines Gleichstrommotors mit Hilfe des Halleffektes) ed. by Margaret W. Raven, tr. by Lloyd G. Robbins, Science Translation Service. Feb 58 [12]p. 10 refs. STS-276; Bureau of Ships Translation 647.
Order from LC or SLA mi$2.40, ph$3.30 59-12040

Trans. of ETZ Elektrotechnische Zeitschrift (West Germany) 1956, v. 77, no. A 17, 578-581.

One can measure magnetic fields in a simple manner with Hall-effect generators made of indium arsenide. For measurement of field strength distribution in the air gap of a dc motor, one can either install several Hall-effect generators rigidly under the pole shoe or else attach one Hall generator to the armature. In the latter case, the constant control current and the Hall voltage proportional to the air gap induction are connected to two slip-ring pairs. In this manner, the pattern of magnetic induction in the armature circuit can be made visible on the projection screen of a cathode-ray oscillograph or be recorded by a loop oscillograph. Armature reaction, reversing pole influences, yoke fluctuations, etc., are therewith accessible to direct measurement. (Author's summary)

Laloë, Michel.
IMPROVEMENTS IN ELECTROMAGNETIC DETECTION METHODS, tr. by FHB. 14 Apr 59, 7p. (5 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-16172

Trans. of French patent 976,263, Group 12, Class 4; patented from 25 Oct 50, applied for 7 Oct 48, pub. 15 Mar 51.

A method is presented for distinguishing echos from stationary and moving bodies in coherent radar devices. The method consists in applying with continually reversed polarities, the video signal having double polarity coming from the coherer to the Wehnelt tubes of two oscillographs which have remanent screens of different colors. This application is carried out by means of electric switches which reverses periodically the polarity of the applied signal to each Wehnelt tube. The images appearing on the two cathode screens are fused by an optical system.

Maaz, Karl and Schmid, Rudolf.
HIGH CURRENT INTENSITY IRON YOKES WITH HALL-EFFECT GENERATORS (Hochstromjoche mit Hallgeneratoren) tr. by F. A. Raven, ed. by M. W. Raven. Oct 58, 14p. 5 refs. STS-293; Bureau of Ships Trans. 664.
Order from LC or SLA mi$2.40, ph$3.30 59-16032

Trans. of ETZ Elektrotechnische Zeitschrift. Ausgabe A. Zentralblatt für Elektrotechnik (Germany) 1957, v. 78, no. 20, p. 734-736.

High current intensity iron yokes with Hall generators (59-12033, 59-12039) permit measurement of current and output in DC systems with an error of ± 0.2%, independent of external fields. The high accuracy is attained by the fact that the method of measurement is based directly on Maxwell's law of flux permeation. (Author's abstract)

Maier, Rudolf.
ELECTRIC FURNACE. 20 Aug 59, 5p. (6 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-19230

Trans. of Swiss patent 301,939, class 113, appl. 9 Nov 42, pub. 1 Dec 54.

The patent concerns an electric furnace with simultaneous arc and resistance heating. It is not clear whether the arc circuits and the electrical resistance are connected in series or parallel with each other. According to the main body of the report, the "distinguishing factor" is that they are "in parallel to each other". On the other hand, the claim says that they are hitched in series. The invention is described in several possible realizations.

Selenyi, P.
MÉTHODES, RÉSULTATS ET POSSIBILITÉS DU PROCÉDÉ D'ENREGISTREMENT ÉLECTROSTATIQUE, tr. by Klersy. 23 Feb 59 [20]p. 15 refs.
Trans. no. A 269 (text in French).
Order from SLA mi$2.40, ph$3.30 CEA-tr-A269

Trans. in French of Z[eitschrift für] Techn[ische] Phys[ik] (Germany) 1935, v. 12, p. 607-614.

Wiesner, R.
BOUNDARY CONDITIONS AND TRANSIT TIME EFFECTS IN CONNECTION WITH THE NOISE PHENOMENON (Randbedingungen und Laufzeiteffekte beim Rauschvorgang). [1959] [19]p. 21 refs.
No. 256.
Order from SLA mi$2.40, ph$3.30 59-17905

Trans. of Annalen der Physik (East Germany) 1953, 6 Folge, v. 12, no. 7/8, p. 361-378.

Assuming uniform electron velocity, there is discussed the question as to which boundary conditions are to be set up at a noisy cathode. First of all there are discussed the two fundamental possibilities of a pure current fluctuation (J-fluctuation) and a pure velocity fluctuation (v-fluctuation) at the cathode. In the case of full space charge the no-load noise voltage at the diode shows a course with $1/w^2$ if J-noise is assumed. In the case of the v-noise, the frequency course is determined by 1/w. The noise relationship with regard to velocity and convection current in the interior of the discharge space are discussed for both types of fluctuation, and compared with each other. In the case of noise-free relationships the state of full space charge is located at the boundary of the stability range. If only one of the two fluctuations of type J- or v- is added, then the stability is disturbed during the half period. On the basis of this, one of the two types of fluctuation alone is not capable of existence in the case of ideal space charge. It is therefore assumed that both fluctuations exist and such a relationship is set up between them that the stability is secured during the whole period of the sinus-shaped fluctuations. The system moves at the boundary of stability. The results indicate that also in the case of great running angle the share stemming from the J-fluctuation furnishes, in certain cases, a contribution which must not be neglected. (Author)

Ordnance, Missiles, and Satellite Vehicles

PRODUCTION OF EXPLOSIVES. 18 May 59, 2p.
Order from LC or SLA mi$1.80, ph$1.80 59-16835

Trans. of German patent 269, 826, cl. 78c, gr. 14, pat. from 29 Oct 12, pub. 31 Jan 14, by Sprengstoff A. G. Carbonit, Germany.

The production of explosives characterized by the utilization of hexanitrosulfobenzide alone or in combination with other compounds is discussed.

ROCKETS (Raketnoye Oruzhiye) tr. by H. H. [1959] [8]p. (15 photos omitted) 11 refs. H-2527.
Order from LC or SLA mi$1.80, ph$1.80 59-16012

Trans. from [Bol'shaya Sovetskaya Entsiklopediya] (USSR) 1958, v. 51, p. 256-259.

This is a typical straightforward encyclopedia-type article. The article includes a tabulation of the basic characteristics of several US, German, and Swiss rocket weapons (Lacrosse, Honest John, Hermes A, Corporal, Regulus, FAU-2 (German), Matador, Redstone, Snark, Navajo, Schmetterling (German), Oerlikon (Swiss), Terrier, NIKE, Talos, Bomarc, Falcon, Sparrow I, Rascal, and Petrel).

SOVIET ARTIFICIAL EARTH SATELLITE (Sovetskiy Iskusstvenny Sputnik Zemli) [1958] 15p. (1 photo omitted) F-TS-9405/III.
Order from OTS $0.50 59-11877

Trans. of Radio [Moscow] (USSR) 1957, no. 11, p. 7-10.

The construction and launching of the Soviet artificial earth satellite (AES) necessitated the solution of numerous complex and new scientific and technical problems. The spherical satellite was installed in the nose of the carrier rocket and covered with a protective cone. It was fired vertically, and after becoming airborne, its axis declined so that on reaching the predetermined orbit the rocket traveled parallel to the earth surface at an altitude of several hundred kilometers and a speed of 8000 m/sec. The satellite's orbit is an ellipse with one focal point in the earth's center. The orbit's plan remains constant in relation to fixed stars and is 65 degrees inclined towards the earth's equator. Because of air resistance, the orbit changes and the time of complete revolution gradually decreases. In decreasing to denser layers of the earth's atmosphere, the generated friction will burn up the satellite. The orbital parameters of the AES allow its observation at a wide range of latitudes on all continents. This can be carried out by both radio receivers and optical instruments, and the data obtained are processed with the newest calculating facilities, such as electronic computers and yield valuable information on the density of atmosphere in outer space. A detailed description of the physical characteristics and radio signals of the AES is given, and a program of scientific exploration outlined for studies of the ionosphere and its chemical structure; pressure; density; magnetism; cosmic rays; corpuscular, UV and X radiation; and the electrostatic field of the upper layers of the atmosphere.

Medard, Louis and Dutour, Maurice
PROPERTIES OF CYCLO-TRIMETHYLENE-TRINITROSOAMINE, tr. by George R. Loehr. Aug 58 [7]p. 11 refs. Picatinny Arsenal Translation no. 14.
Order from LC or SLA mi$1.80, ph$1.80 59-12029

Trans. of Memorial des Poudres (France) 1955, v. 37, p. 19-24.

Cyclo-trimethylene-trinitrosoamine is classed with powerful and brisant explosives. Its rate of detonation

reaches 7800 m/s. It has the advantage of being quite insensitive to impact. It would not be expensive. Unfortunately the great ease with which it is decomposed by acids or by substances with acid reactions, in practice very greatly diminishes its advantages. (Author)

Aubertein, Paul
THE GRANULOMETRY OF EXPLOSIVES, tr. by George R. Loehr. Mar 58 [14]p. 1 ref. Picatinny Arsenal Translation no. 21.
Order from LC or SLA mi$2.40, ph$3.30 59-12027

Trans. of Mémorial des Poudres (France) 1955, v. 37, p. 139-148.

In order to be correct and reproducible, granulometric measurements by sieving must satisfy two essential conditions: the product must spread out by sliding on the screen, without flying out and sieving must be continued until nothing more passes through (constant-weight sieving). Although manual sieving gives acceptable results, the mechanical sieve which was perfected is preferable, both from the point of view of rapidity of execution and in terms of the fidelity and precision of the results, which are absolutely independent of the operator. Results by manual sieving at constant weight and those by mechanical sieving are in excellent agreement. Crystals of most explosives become electrified by friction during sieving. This phenomenon of electrization considerably disturbs granulometric measurements, especially when the grains are very fine. The addition of from 1% to 2% of graphite diminishes this effect, but only within limits. Only sieving under water makes it possible to know the exact granulometric distribution of fine powders. Although granulometric distribution of ordinary products is often only approximatively known (±2), because of heterogeneity. (Extracted from the report)

Babat, G.
QUANTUM STARSHIP (Kvantovyy Zvezdolet). [1958] 7p. F-TS-9781/III.
Order from OTS $0.50 59-11876

Trans. of Yunyy Tekhnik (USSR) 1957 [v. 2] no. 12, p. 46-48.

A popular discussion of problems relating to cosmic flight. Motive force for a space ship could be supplied by exact conversion of atomic nuclei into fine electromagnetic quanta.

Lange, G. and Hartmann, Fritz.
PROCESS FOR MANUFACTURING SMOKELESS POWDER WITHOUT USING VOLATILE SOLVENTS, tr. by Henry Voos. May 59 [6]p. 4 refs. Picatinny Arsenal translation no. 34.
Order from LC or SLA mi$1.80, ph$1.80 59-18074

Trans. of German patent 1013555, registered 8 Aug 57.

The process is characterized by the satisfactory plasticizing of the nitrocellulose with natural or synthetic resins at all temperatures under 75° and by the effective use of volatile explosive oils at moderate temperatures and even under cooling. The plasticizing takes place in the presence of water. Plasticizing can be undertaken at room temperature or under cooling, and the mixture can be heated at the end of the kneading process. The resin of nitrocellulose can be added to the mixture in the form of an emulsion.

Shamgar, A. and Grodzinsky, J.
RESISTANCE OF PENTHRITES (PETN) TO HEATING AS DETERMINED BY THE INDUCTION PERIOD OF THE EXPLOSION, tr. by George R. Loehr. Oct 57 [13]p. 5 refs. Picatinny Arsenal Translation no. 17.
Order from LC or SLA mi$2.40, ph$3.30 59-12022

Trans. of Mémorial des Poudres (France) 1955, v. 37, p. 111-119.

A reproducible method for determining the induction periods (IP's) of explosions in sealed ampules was perfected and used as a means of examining the thermal resistance of PETN. This method is suitable for differentiating various grades of PETN in terms of thermal resistance. The pattern of the differentiation parallels the degree of purity of the PETN. A stabilization method in an acid medium was tried which furnishes PETN's having very high resistance in terms of their IP's. All the values for energies of activation were computed in terms of thermal decomposition until explosion. The proposed mechanism of decomposition appears to consist of a catalytic reaction superimposed on a monomolecular reaction. (Author)

Tabouis, Francis and Vaganay, Jean
LABORATORY SETUP FOR THE INVESTIGATION OF CONTINUOUS PROCESSES, tr. by George R. Loehr. Mar 58 [8]p. 2 refs. Picatinny Arsenal Translation no. 20.
Order from LC or SLA mi$1.80, ph$1.80 59-12018

Trans. of Mémorial des Poudres (France) 1955, v. 37, p. 413-416.

A description is given of apparatus suited for the investigation of different nitrations or continuous processes for the preparation of RDX, dinitro-phenetole. The setup consists of four sealed vessels or nitrators equipped with all the necessary accessories and arranged in a series in a rigid frame, especially conceived for easily mounting or dismounting the apparatus.

Tavernier, Paul and Lamouroux, Maurice.
CALORIMETRIC DETERMINATIONS FOR TWELVE ORGANIC SUBSTANCES WHICH CAN BE USED IN PROPELLANTS, tr. by George R. Loehr. June 57, 15p. 4 refs. Picatinny Arsenal Trans. No. 12; AD-135 104.
Order from LC or SLA mi$2.40, ph$3.30 59-12303

Trans. of Mémorial des Poudres (France) 1955, v. 37, p. 197-206.

The heats of formation were determined for dimethyl-5-5-hydantoin, methyl-ethyl-5-5-hydantoin, methyl-5-

hydantoin, dinitrate of diethanol nitramine, methyl urethan ethylamine nitrate, dinitro-2-4-ethylbenzene, allyl phthalate, bis (ethyl hexyl)phthalate, ethanol diphenyl urea, morpholyl diphenyl urea, β-naphthyl diphenyl urea, and malonic diamide. For each product the principal physical characteristics are given. Starting with the results obtained in the calorimetric bomb, the heat for formation at constant volume and constant pressure is calculated for each item. The various thermochemical characteristics are tabulated.

Thomanek, Franz R. and Brandmayer, Carl
BOTTLE-SHAPED HOLLOW SPACE LINING BODY FOR ARMOR-PIERCING BURSTING CHARGE, tr. by J. C. Levy. 21 Aug 59, 4p. (illus. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-19225

Trans. of German patent 911,952, cl. 72d, gr. 1801. Patented in Germany from 6 Oct 44, appl. announced 1 Oct 53, granted 4 Apr 54, pub. 20 May 54.

The invention proposes to place the turning point of the bottle elements at most at one-half the height of the lining body above the base, and preferably in the range of from 1/4 to 1/3 of the height of the body. The pattern of the wall thickness is also developed progressively. (Extracted from the report)

Weible, A.
THE PENETRATION RESISTANCE OF BODIES WITH VARIOUS HEAD FORMS AT PERPENDICULAR IMPACT ON WATER (Der Eindringswiderstand von Korpern mit Verschiedenen Kopfformen bei Senkrechtem Aufschlag auf Wasser). [1959] [33]p. 26 refs.
N. R. L. Trans. no. 286.
Order from SLA mi$3.00, ph$6.30 59-15094

Trans. of German Aviation Research Report No. 4541, Forschungsanstalt Graf Zeppelin, Stuttgart, Germany, rev. Feb 52.

For the solution of the problem of mechanical stress of impact sensitive parts during the penetration of bombs, mines, and torpedoes into water, it is necessary to know the transient forces acting during the process of penetration. An insight into the order of magnitude of the penetration resistance and into the course of motion of bodies with various head forms is afforded by calculations which have been carried out on the basis of research done by Wagner and Schmieden and which have been compared with measurements of the penetration resistance by Watanabe and Majer. At small impact velocities, the theoretical course of deceleration agrees well with the measurements up to the maximum at least, if the nonflatness of the experimental bodies is considered in applying the theory. At large impact velocities where the flow around the experimental bodies no longer fulfills the conditions of the theory of Wagner and Schmieden, it seems that, according to the results of experiments made so far, the uncorrected-and corrected-values of the theory of Wagner and Schmieden supply upper and lower limits for the course of deceleration in the case of cones and ogival points. However, very extensive experimentation will have to be carried out before we have a definitive clarification of the immersion process at high impact velocities. (Extracted from the report)

Sanitation and Safety Engineering

Korsh, L. Ye.
ON THE QUESTION OF USING DRINKING-WATER RESERVOIRS FOR PURPOSES OF PHYSICAL CULTURE AND SPORT. [1959] 11p. (3 figs. omitted).
Order from LC or SLA mi$2.40, ph$3.30 59-18763

Trans. of Vodosnabzheniye i Sanitarnaya Tekhnika (USSR) 1958, no. 5, p. 20-23.

Investigations conducted at the Klyazma reservoir in the "Moscow canal" system are reported, with reference to the influence of such polluting factors as inhabited localities, surface run-off, grazing and watering of livestock, public bathing, and navigation. It is concluded that the use of the eastern reach of the reservoir as a resort for tourists and as a watering place for livestock should be prohibited, and that there should be a constant check by sanitation authorities on the quality of the water.

Meier, Ernst.
AIR RAID SHELTER, tr. by J. C. Levy. 11 May 59, 6p. (8 figs. 19 subclaims omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-16855

Trans. of Swiss patent 287,262, Class 57; applied for 6 Feb 51, registered 30 Nov 52, pub. 16 Mar 53.

The shelter is characterized in that it is arranged underground in proximity to a dwelling or business house, and is connected with the underground floor of the dwelling or business house by means of an underground corridor that can be closed off from the shelter by means of an armored door, and in that it also has an emergency exit that leads to the open air and can be closed off from the shelter by means of an armored door.

Shigorin, G. G. and Molokov, M. V.
ASSEMBLY OF INSTALLATIONS FOR THE PURIFICATION OF SMALL QUANTITIES OF SEWAGE. [1959] [8]p. (4 figs. omitted) 3 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-18761

Trans. of Vodosnabzheniye i Sanitarnaya Tekhnika (USSR) 1958, no. 2, p. 6-9.

The layout of installations for a biological purifying station with a capacity of 200 cu m/day arranged in a single building is described.

Trucksess, R.
PROBLEMS OF THE HEXACHLOROCYCLOHEXANE. [1959] [8]p. 10 refs.
Order from SLA mi$1.80, ph$1.80 59-17874

Trans. of [Seifen-Ole-Fette-Wachse (West Germany) 1950, v. 76, p. 145-147.

FOOD, HANDLING, AND PACKAGING EQUIPMENT

Food

METHOD OF MAKING SAUSAGE SKINS FROM CURVED, POOR QUALITY, OR TOO NARROW INTESTINES, tr. by F. H. B. 13 Feb 59, 5p. 2 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-14215

Trans. of Dutch patent 62,435, cl. 66 b 15, pat. 4 Jan 49, appl. 20 Jan 43, pub. 15 Feb 49, by Vleeschwarenfabriek Gerrit Hunink of Wijhe, and Vennootschap onder de Firma "Darmenindustrie H. Vaessen" of Schalkhaar, municipality Diepenveen.

The method is characterized in that the intestine is first freed from fat and made porous, then stretched out and lengthwise cut and the strips then in wet condition are placed around a wooden form (preferably cylindrical) and in the area where they overlap are pasted together by their own adhesion, whereafter the sausage skin thus formed is dried and removed from the form. The skin is made porous by a lye treatment.

Fiori, A.
SPONTANEOUS DECOMPOSITION OF THE LECITHIN OF THE EGG (3-D NOTE) 11 Aug 55 [7]p. 11 refs.
Order from SLA mi$1.80, ph$1.80 59-17821

Trans. of [la Rassegna di Clinica Terapia e Scienze Affini (Italy) 1932, v. 31, Apr, p. 74-77].

Packaging

Bonecke, Alfred.
CLOSURE FOR RECEPTACLES, ESPECIALLY BOTTLES AND CONTAINERS, tr. by J. C. Levy. 8 Apr 59, 6p. (7 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-16181

Trans. of German patent 817, 255, Class 64a, Group 20/01; patented from 2 Oct 48, granting announced 23 Aug 51, pub. 15 Oct 51.

According to the invention the novel closure, which is well suited for receptacles and especially bottles and containers, consists of a cap inside which are mounted elastic arms which engage, for example, under a bulge of a bottle and which are controlled by the cap. The cap suitably comprises a tubular portion and a conical portion that is adapted to control the elastic arms, which latter extend outwardly from a disk. (Extracted from the report)

Gahide, Charles.
CASE FOR POSITION-ADJUSTABLE SHAVING SOAP, tr. by J. C. Levy. 23 Apr 59, 3p. (4 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-16166

Trans. of French patent 714,968, Group 20, Class 3; applied for 9 Apr 31, granted 14 Sep 31, pub. 23 Nov 31.

The case is characterized by a tube with inner longitudinal projections on which can turn a base acting on a central screw whose head is provided with a groove receiving a sliding tongue accommodated in said base for determining, by the rotation of the latter, the unscrewing of the central screw effecting the pushing out of the stick of soap by means of a lift plate forming a nut.

MACHINERY, FABRICATION, AND ACCESSORY EQUIPMENT

Barth, W[alter].
LES MODES D'ECOULEMENT LORS DU TRANSPORT DES PARTICULES SOLIDES OU LIQUIDES DANS LES GAZ, tr. by R. Caboz. 15 Jan 59 [34]p. 17 refs. Trans. no. A 453 (text in French).
Order from SLA mi$3.00, ph$6.30 CEA-tr-A453

Trans. in French of Chem[ie]-Ing[enieur]-Tech[nik] (West Germany) 1958, v. 30, no. 3, p. 171-180.

The flow of materials in pneumatic transport is analyzed, taking into consideration the resistance of air to the materials, weight and friction during elastic shock of particles against the walls of the transport device, etc. Theoretical results are checked against the results of practical experimentation with a vertical pneumatic transport device. The limit at which stoppage would occur can be determined in relation to the known power of the blower.

Bellwinkel, A.
MODERN GRINDING PLANTS. [1959] 29p. (Eng. summary omitted in part) 14 refs.
Order from SLA mi$2.70, ph$4.80 59-17565

Trans. of Zement-Kalk-Gips (West Germany) 1959, v. 12, no. 2, p. 41-55.

Since 1955 closed-circuit mills have chiefly been installed for the grinding of cement. The results obtained show that the larger units are not more favourable than the smaller ones with respect to the required kWh per ton. The data confirm that the large units (over 900 kW) installed have for the most part been bucket-elevator closed-circuit mills. The closed-circuit mill is more adaptable for the grinding of cements of varying degrees of fineness. So far, there is no evidence to show that any particular system is definitely superior to the others as regards the required kWh per ton. In the range of over 3500 Blaine more favourable kWh per ton can be more readily achieved with closed-circuit grinding. (Extracted from the report)

Bernutat, P.
NOMOGRAM TO BE USED FOR APPROXIMATE DESIGN CALCULATIONS OF TUBE MILLS. [1959] [5]p. (Eng. summary omitted in part) 6 refs.
Order from SLA mi$1.80, ph$1.80 59-17564

Trans. of Zement-Kalk-Gips (West Germany) 1959, v. 12, no. 2, p. 65-67.

On the basis of the specific throughput (in kg/kWh) the significant influence values for the determination of the dimensions of a tube mill are assembled in an equation. From this equation has been developed a nomograph for tube mills, which shows all seven quantities in a convenient form and offers the advantage that the influence of changes in the individual quantities on the final result can immediately be evaluated. The grindability testing apparatus developed by Zeisel is recommended for determining the specific throughput of the material ground. (Extracted from the report)

Derbuel, Victor.
WHEEL FOR CUTTING FINE THREADS. 21 Aug 59, 2p. (2 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-19229

Trans. of Swiss patent 267,746, cl. 79f, appl. 23 Dec 46, pub. 1 July 50.

The present invention consists of 2 equal wheels whose axes are arranged parallel to the central axis of the thread to be cut, and situated in a common plane with the latter. The object is a grinding device with all the precision necessary to turn out threads with a pitch as low as 0.3 mm. The device is characterized by having the wheels threaded with at least one thread presenting the same thread angle as the thread to be cut, and by having the relation 1:2 between the average diameters of the thread to be cut and the cutting wheels, in such a way that the tooth gap of the wheel thread shall be double that of the thread to be cut. (Extracted from the report)

Dressen, Wilhelm.
APPARATUS FOR CUTTING OFF FILLERS OF SANITARY NAPKINS AND FEEDING THEM TO THE WRAPPING MACHINE, tr. by FHB. 13 May 59, 8p. (2 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-16836

Trans. of German patent 634,119, Class 30 d, Group 14; patented from 29 Mar 35, pub. 17 Aug 36.

The invention has for its object a machine which excels by extraordinary structural simplicity and is therefore relatively inexpensive and easy to operate. At the same time it has, in comparison with the conventional machines which operate with a circular cutter, the advantage that the circular cutter is not passed vertically from the top to the cellulose web as in these machines, but cuts with a circular motion laterally through the cellulose web, whereby the cutter in its operation is blunted only to a small extent and consumes little drive power. According to the invention a hollow shaft mounted in longitudinal direction of the feeding table, which drives the feeding device by means of a worm gear and a cam plate positioned on the shaft of its worm and causes the plunger to lift periodically, passes with one crank arm the cutter plate in a circle and moves, by means of a worm gear, the lateral cutters in a circle. The gear turns at the same time a shaft passing through the hollow shaft, which rotates the cutter plate. The lateral cutters are placed on pivotable hoops by whose pivoting outward they can be removed from their counter cutters and simultaneously be stopped by disengagement of their drive device. The cutt-off fillers are then fed to the wrapping machine by a wire hoop which is mounted above the fillers and is periodically lowered and simultaneously advanced. (Extracted from the report)

Howahr, E. and Pahnke, H. J.
UNDER-DRIVEN FORGING PRESSES. (WITH DISCUSSION). [1959].
Order from BISI £6 15s BISITS-1321

Trans. of Stahl u[nd] Eisen (West Germany) 1959 [v. 79] 16 Apr, p. 485-494.

Lapin, P. A. and Kondratovich, N. E.
PREPARATION OF CIRCULAR SAWS FOR HIGH SPEED WORK (Podgotovka Kruglykh pil k Rabote na Vysokikh Skorostyakh Rezaniya) tr. by A. Kokle. [1959] [7]p. Trans. no. 4414.
Order from LC or SLA mi$1.80, ph$1.80 59-17420

Trans. of Lesnaya Promyshlennost' (USSR) 1952 [v. 30] no. 1, p. 25-27.

Riemenschneider, F. and Nickrawietz, K.
DRIVES FOR FORGING PRESSES. [1959].
Order from BISI £4 10s BISITS-1322

Trans. of Stahl u[nd] Eisen (West Germany) 1959 [v. 79] 16 Apr, p. 494-500.

Shchirenko, N. S. [Polovchenko, I. G.] and others.
EXPERIMENTAL OPERATION OF A NEW BLAST-FURNACE TOP DISTRIBUTOR. [Opyt Raboty Novogo Raspredelitelya] [1959] 2300 words.
Order from HB $4.60 HB-4613

Trans. of Stal' (USSR) 1958, v. 18, no. 12, p. 1066-1071.
Another translation is available from PS $5.00 [1959] [9]p.

Description of a new BF top distributor having an intermediate hopper and giving an improved stock distribution, satisfactory gas flow, and good furnace working. Design details; arrangement of doors on gas seal. Profile of stock line efore and after blowing-in of furnace. Carbon dioxide content of top gas across furnace section. Typical stockline recorder charts. Possibility of installing the new top distributor during a major repair without raising the top structure and skip bridge, and of dispensing with rotation of the small bell and its hopper. (HB abstract)

Wenzel, Alfred and Welger, Gebrüder.
STRAW PRESS COMPRIZING A STRAW COMMINUTOR CONSISTING OF ROTARY AND FIXED ELEMENTS, tr. by PCC. 25 May 59, 6p. (7 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-16840

Trans. of German patent 903,639, Class 45e, Group 23/07; patented from 23 Feb 51, laid open to inspection 11 Oct 51, grant announced 24 Dec 53, pub. 8 Feb 54; addition to German patent 831,032, patented from 28 Mar 50, pub. 11 Feb 52.

The concept of patent No. 831,032 is developed by this invention to the extent that each type of conventional straw comminutor can be utilized for the purpose of the invention in straw presses, regardless of whether said comminutor comprizes cutting blades, milling cutters, tearing blades, or other means, in such a manner that, if desired, no more loose unpressable short straw or pressable short straw in bale form can leave the press. (Extracted from the report)

Wewerka, A.
NOTCH EFFECT. [1959] 7p. 18 refs. R. T. P. Trans. no. 2394.
Order from SLA mi$1.80, ph$1.80 59-17682

Trans. of Maschinenbau (Germany) 1929, v. 8, no. 2, p. 33-37.

Engines and Propulsion Systems

ELECTROMAGNETIC MULTIPLE-DISK CLUTCH FOR TORQUE TRANSMISSION, tr. by F. H. B. 5 Mar 59, 5p. (2 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-14704

Trans. of Swiss patent 214,237, cl. 96 c, pat. from 15 Apr 41, appl. for 24 June 39, pub. 1 July 41 (Priority: Germany, appl. 1 Sep 38) by Zahnradfabrik Friedrichshafen, Aktiengesellschaft, Friedrichshafen a. B., Germany.

The clutch is characterized in that a coil is mounted between two stacks of disks which are independent of each other, namely, an inner and outer stack, so that the magnetic coil magnetizes both stacks of disks. The carriers of one clutch half are guided with snug fit in the other clutch half, so that a fully satisfactory guidance (cooperation) of these parts with each other takes place and additional passages for the lines of magnetic force are produced. The core disk may consist of two annular parts, one placed inside the other, which are axially displaceable with respect to each other and serve for compressing both stacks of disks independently against each other, for the purpose of compensating structural inaccuracies and non-uniform wear and tear of the disks.

THE LORIN NOZZLE FOR AIRCRAFT PROPULSION. [1959] 40p. (some illus. omitted) R. T. P. Trans. no. 2503.
Order from SLA mi$3.00, ph$6.30 59-17703

Trans. of mono. Triebflügeljäger mit Lorindüsenantrieb, Bremen, 1944.

Bauer, Gustav and Brose, Walter.
FLUID DRIVE OF THE FOTTINGER TYPE DRIVE, tr. by J. C. Levy. 28 Apr 59, 4p. (2 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-16179

Translation of German patent 541,961, Class 47h, Group 18; patented from 19 Mar 30, granting announced 24 Dec 31, pub. 16 Jan 32.

Fluid drive or fluid coupling of the Föttinger type drive, wherein when a certain output is exceeded the fluid content of the work cycle or cycles is automatically reduced and, after reduction of output has taken place, is automatically increased again, is described. The drive is characterized in that there are provided--before the inlet ports and before the outlet ports or before both--special slide valves, or the like, which are moved in such a way by means of springs that transmit the torque in a known manner from a coupling part to the shaft that, when the output is exceeded, the inlet ports are partially or completely closed off and the outlet ports are partially or completely opened and, after reduction of output has occurred, they are respectively reopened or reclosed in correspondence.

Campini, Secondo.
METHOD OF REACTION PROPULSION AND MEANS RELATING THERETO FOR AIRPLANES AND HYDROPLANES, tr. by CP. 26 May 59, 23p. (27 figs. omitted).
Order from LC or SLA mi$2.70, ph$4.80 59-16831

Trans. of French patent 741,858, Gr[oup] 6, Cl[ass] 2; applied for 29 July 32, granted 20 Dec 32, pub. 22 Feb 33.

Caproni, Gianni.
PROPULSION APPARATUS FOR AIRCRAFT, tr. by CP. 30 Apr 59, 4p. (3 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-16167

Trans. of French patent 767,816, Gr[oup] 6, Cl[ass] 4; applied for 30 Jan 34, granted 7 May 34, pub. 25 July 34. (Patent application filed in Italy 17 Mar 33).

A combined propulsion apparatus for aircraft is described in which a fraction of the propulsive thrust is furnished by a propeller driven by a motor or an explosion turbine and another fraction by the reaction produced by a mixture of air and exhaust gases leaving the posterior portion of the apparatus after having traversed axially a channel in the form of a Venturi tube. This apparatus is essentially characterized in that the motor or turbine is placed in the hollow anterior portion of the fuselage, the part widening toward the forward end and leaving between the motor or turbine and the inner wall of the said hollow portion an annular

passage for the air introduced by the motion of the apparatus. This air cools the radiator of the motor and is then mixed with the hot exhaust gases of the same motor; the said mixture expands in the posterior part of the fuselage channel and produces a propulsive reaction.

Hammar, O. G., and Jung, R.
THE BEHAVIOUR OF THE NATURAL CIRCULATION IN WATER-PIPE BOILERS WITH A FALLING BOILER PRESSURE, tr. by R. J. Richardson. Dec 55 [28]p. 10 refs. A. E. R. E. Lib/Trans. 603.
Order from SLA mi$2.70, ph$4.80 59-17521

Trans. of Brennstoff-Wärme-Kraft (West Germany) 1955, v. 7, no. 1, p. 1-10.

Hitherto it has been supposed that a disturbance in the circulation current detrimental to the heated up-pipes is to be expected when a falling off of boiler pressure owing to loading shocks leads to a self-vaporization of the water in the down-pipes. With an apparatus constructed as a section of a ready-made boiler of normal size for the examination of natural circulation the loading shocks, which arise in practice through a blowing off of steam, were imitated and the resulting variable velocities in circulation were measured. The limiting value of the temporary fall in pressure obtained from this $\Delta p/\Delta t$ exceeding which a disturbance in circulation occurs, depends in the main upon the initial values of the boiler pressure and the water velocity in the down-pipe. By the use of higher water velocities in the down-pipes and the greatest possible initial heating of the up-pipes, the behaviour of the water circulation during loading shocks is favorably influenced. On the other hand an antificial throttling of the circulation current by means of shutters or throttle obstruction leads far more easily to disturbances of circulation. Under normal conditions, especially with greater initial values of water velocities in the down-pipe, the permissible temporary fall in pressure is considerably greater than the limiting value which signals the beginning of self-vaporization of the water contents in the down-pipe. (Author)

Hartmann, W.
DISCHARGE TESTS AND FORCE MEASUREMENTS ON THE STATIONARY BLADING OF A SINGLE-STAGE EXPERIMENTAL TURBINE IN THE AIR TEST PLANT, tr. by M. Flint. [1959] 41p. 11 refs. R. T. P. Trans. no. 2393.
Order from SLA mi$3.30, ph$7.80 59-17725

Trans. of VDI-Forschungsheft (Germany) 1939, no. 397, p. 1-20.

Holländer, H.
DETERMINATION OF OIL IN CONDENSATES (Ölbestimmung im Kondensat). [1959] [3]p.
Order from SLA mi$1.80, ph$1.80 59-17866

Trans. of Seifen-Öle-Fette-Wachse (West Germany) 1953, v. 79, no. 21, p. 546.

Karpov, Yu., Krasnoperov, V. and Okunev, Yu.
AN UNUSUAL MOTOR (Neobychnyy Dvigatel') [1958] 5p. [3 illus. omitted] F-TS-9727/III.
Order from OTS $0.50 59-11875

Trans. from Tekhnika-Molodezhi (USSR) 1958 [v. 26] no. 9.

Rotation of a dielectric plexiglas cylinder is established by interaction of stationary electrical charges under the influence of increased voltage applied to electrode plates. Unlike charges on the surface of the cylinder are neutralized by the flow of charged particles from the electrodes. The motor is capable of 6000 rpm and of developing a power of 5 w. The device could be used in conjunction with a high-voltage radioactive electrostatic generator.

Leduc, Rene.
PROCESS OF CONVERTING CALORIFIC ENERGY INTO KINETIC OR POTENTIAL ENERGY, tr. by CP. 17 Apr 59, 7p. (7 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-16169

Trans. of French patent 770, 326, Gr[oup] 5, Cl[ass] 3; applied for 7 June 33, granted 25 June 34, pub. 12 Sep 34.

The process consists in making a fluid undergo, during its passage through a nozzle, variations in temperature and velocity (and consequently in pressure and volume) capable of being translated by a cycle the surface of which represents the quantity of calorific energy converted into kinetic or potential energy.

Leduc, Rene.
PROCESS OF CONVERTING CALORIFIC ENERGY INTO KINETIC OR POTENTIAL ENERGY, tr. by CP. 27 Apr 59, 10p. (12 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-16170

Trans. of French patent 779, 655, Group 5, Cl[ass] 8; applied for 2 Jan 34, granted 19 Jan 35, pub. 10 Apr 35.

Sänger-Bredt, Irene.
THE CHARACTERISTICS OF HYDROGEN AND WATER AS WORKING GASES FOR REACTOR-HEATED ROCKET MOTORS (Die Eigenschaften von Wasserstoff und Wasser als Arbeitsgase für kernenergetisch beheizte Raketentriebwerke). Aug 59, 51p. 25 refs. NASA TT F-1.
Order from OTS $1.50 59-21108

Trans. of Astronautica Acta (Austria) 1957, v. 3, no. 4, p. 241-280.

Hydrogen and water vapor have been investigated as to their applicability as working fluids with an energy higher by several orders of magnitude than has hitherto been available with steam boilers. Enthalpy-entropy diagrams are computed for either gas, with complete regard to dissociation, as well as ionization, over the pressure range between 10^{+1} to 10^{-5} atm, and within the temperature range between 500 and 10,000° K. Exhaust velocities possible for water,

or water vapor, are derived and compared. Heat transfer to the combustion chamber walls is examined. Three methods of heating the working fluid are investigated: fission reactor, arcs, and fusion reactors. (NASA abstract)

Sokolik, A.
DETONATION AND PEROXIDES IN THE INTERNAL COMBUSTION ENGINE. [1959] 15p. R. T. P. Trans. no. 2429.
Order from SLA mi$2. 40, ph$3. 30 59-17687

Partial trans. (p. 593-616) of Acta [Physicochimica U. R. S. S.] (USSR) 1938, v. 9, no. 3/4, p. 593-[620].

Styrikovich, M. A. and Kholodovskiy, G. E.
AN INVESTIGATION OF CIRCULATION IN STEAM-GENERATING TUBES AT HIGH STEAM PRESSURES. [1959] 33p. 10 refs.
Order from LC or SLA mi$3. 00, ph$6. 30 AEC-tr-1433

Trans. of Akademiya Nauk SSSR. Otdeleniye Tekhnicheskikh Nauk. Izvestiya, 1951, p. 506-528.

Effective circulation pressures in the unheated vertical 56-mm pipe were investigated at circulation velocities between 0. 2 and 0. 9 m/sec at steam pressures of 35 kg/cm^2 to the critical value, and thermal loads (i. e., reduced steam velocities) which are considerably greater than the steam velocities in individual tubes of the largest modern boilers with natural circulation. It was shown that as the steam pressure, circulation velocity and reduced steam velocity increase, the slippage losses decrease. At 182 kg/cm^2 and above, the slippage losses are partically zero at all circulation velocities, and the actual effective pressure is equal to the theoretical value. (Author's summary)

Zeman, J.
THE RECENT DEVELOPMENT OF TWO-STROKE ENGINES. I. CHARGING METHODS AND ARRANGEMENTS, tr. by J. Helledoren. [1959] 12p. 4 refs.
R. T. P. Trans. no. 2470.
Order from SLA mi$2. 40, ph$3. 30 59-17674

Trans. of V[erein] D[eutscher] I[ngenieure]. Z[eitschrift] (Germany) 1943, v. 87, no. 1/2, p. 7-14.

See also 59-17675

Zeman, J.
RECENT DEVELOPMENT OF THE TWO-STROKE ENGINE. II. DESIGN FEATURES, tr. by J. Helledoren. [1959] 9p. R. T. P. Trans. no. 2382.
Order from SLA mi$1. 80, ph$1. 80 59-17675

Trans. of V[erein] D[eutscher] I[ngenieure]. [Zeitschrift] (Germany) 1943, v. 87, no. 13/14, p. 177-182.

See also 59-17674.

Beroudiaux, Edouard.
CENTRIGUGAL PUMP DIFFUSER, tr. by FHB. 19 May 59, 6p. (3 figs. omitted).
Order from LC or SLA mi$1. 80, ph$1. 80 59-16833

Trans. of French patent 811, 600, Group 5, Class 1; patented from 18 Jan 37, applied for 5 Oct 36, pub. 17 Apr 37.

The centrifugal pump diffuser is characterized in that the sections of its channels are arranged in such a way that the diffusion takes place over their entire length. This diffuser can, besides, be characterized by the following points, jointly or separately: (a) the channels intersect the meridians of the diffuser at a certain angle of considerable size in its area with the largest diameter and become tangents thereof only near the outlet of the diffuser; (b) the blades are entirely cast in one piece with their casing; (c) in the area of the largest diameter, the width of at least some blades is large enough to permit rod holes to pass through and be made without communication with the channels; and (d) the axes of these holes are inclined with respect to the shaft of the pump.

Brenner, W. G. and Gaus, H.
TOWARD SAFER AND BETTER DRIVING-SHAFT TRANSMISSIONS (Besser Schützbare und Besser Geführte Zapfwellen-Triebe). 12 Nov 54 [22]p. (7 figs. omitted) 2 refs.
Order from SLA mi$2. 70, ph$4. 80 59-17844

Trans. of [die] Landtechnik (West Germany) 1954, v. 9, p. 354-359.

Girault, Georges.
USE OF THE DIFFERENTIAL SYSTEM IN A GEAR SHIFT, TO REDUCE THE RATIO, tr. by FHB. 15 May 59, 4p.
Order from LC or SLA mi$1. 80, ph$1. 80 59-16834

Trans. of French patent 935, 298, Group 5, Class 3; patented from 2 Feb 48, applied for 23 Oct 46, pub. 15 June 48.

Hannig, Georg.
SELF-PRIMING CENTRIFUGAL PUMP, tr. by PCC. 30 Apr 59, 3p. (2 figs. omitted).
Order from LC or SLA mi$1. 80, ph$1. 80 59-16180

Trans. of German patent 698, 485, Class 59b, Group 5/01; patented from 2 Nov 38, grant announced 10 Oct 40, pub. 11 Nov 40.

A self-priming centrifugal pump comprizing an impeller mounted excentrically in the working chamber and rotating in a sealing liquid is described, which is characterized by blades each provided at the end thereof with a recess or fork extending to the inner limit of the outlet opening, so that the combination of the blades with the outlet opening forms a jet pump during the rotation of the impeller.

Helfeda, S. A.
PUNCHING METHOD AND APPARATUS FOR ITS EMBODIMENT, tr. by F. H. B. 11 Feb 59, 9p. (5 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-14217

Trans. of Swiss patent 213,959, cl. 79 h, pat. from 31 Mar 41, appl. 12 Feb 40, pub. 16 June 41.

The method provided by the invention is characterized in that the holding of the blank between an elastic and a rigid element is carried out in such a manner as to fit the former as accurately as possible on the latter when the pressure is applied, in order to bring about a preselected distribution of the force holding the blank between these elements, regardless of the fitting unevennesses of these two parts with respect to each other. The device provided by the invention for embodying this method is characterized in that it consists of a blank holder one of whose elements has at least one elastic part, while the other element has a rigid part facing the first, so that the aforementioned first element is fitted as accurately as possible on the second, under the effect of the holding pressure, in order to bring about a preselected distribution of the force holding the blank between these elements without regard of the fitting unevennesses of these elements in relation to each other.

Pichler, Anton.
HOSE-SEALING SCREW, tr. by FHB. 27 Apr 59, 3p. (3 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-16190

Trans. of Swiss patent 130,506, Class 96e; patented from 15 Dec 28, applied for 16 Feb 28, pub. 16 Feb 29. Priority claimed on the basis of application in Germany filed 1 Mar 27.

The hose-sealing screw is characterized in that its threaded pin is enveloped by a casing slotted several times in longitudinal direction and provided with annular notches which spreads (when the nut is tightened) in umbrella-like manner, thus pressing the hose against the sealing disc which covers the damaged spot at the outside.

Schafter, R[udolf].
ETANCHÉITÉ PAR ANNEAUX-GLISSANTS POUR LES POMPES ROTATIVES UTILISÉES DANS L'INDUSTRIE CHIMIQUE, tr. by Kleinberger. 24 Feb 59 [33]p. (bibliography omitted). Trans. no. A 536 (text in French).
Order from SLA mi$3.00, ph$6.30 CEA-tr-A536

Trans. in French of Chem[ie]-Ing[enieur]-Techn[ik] (West Germany) 1957, v. 29, no. 4, p. 241-249.

Various types of slip ring joints are described. The chief points in their favor are slight loss through leakage, low maintenance cost, slight wear on the shaft.

ELECTRIC OVENS FOR MELTING ALUMINUM COMPARTMENT, STATIONARY. 26 Nov 58, 3p. JPRS/DC-L-1163.
Order from OTS $0.50 59-11341

Trans. of Russian mono. Vsesoyuznoye Ob'yedineniye "Mashinoeksport" (All-Union Association "Washinoeksport", Series 6190).

The PK-40 type of compartment electric ovens for melting aluminum are described briefly and instructions for their installation are presented.

LIGHT INDUSTRY OF COMMUNIST CHINA: SELECTED TRANSLATIONS AND EXTRACTS FROM "CHUNG-KUO CH'ING KUNG-YEH". 12 Aug 59, 19p. JPRS: 869-D.
Order from OTS $0.75 59-11764

Trans. of Chung-kuo Ch'ing Kung-yeh (Chinese People's Republic) 1958, no. 22, p. 13-14; no. 24, p. 23-24, 27-29.

Contents:
How to construct a small flat-glass (window glass) factory, by the Provincial Board of Light Industry, Kiangsu Province
Manufacture of high-quality cement with native methods, by Wang Chieh
Production of soda ash from Galuber's salt, by the Kao-tang Hsien Industrial Chemicals Plant
Leaching of straw ashes to obtain paper-making-alkalies soda, by the Laboratory for Pulp and Paper Making, Institute of Scientific Research, Ministry of Light Industry

PIPE JOINT FOR ELASTIC CONNECTION OF A SMOOTH PIPE END, PARTICULARLY AN ASBESTOS CEMENT PIPE, WITH A CONNECTING PIECE HAVING A FLANGE, tr. by F. H. B. 20 Mar 59, 6p. (1 illus. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-14697

Trans. of German patent 669,605, cl. 47 f, gr. 8 04, pat. from 9 Sep 32, pub. 30 Dec 38, by Deutsche Asbestzement-Akt.-Ges., Berlin-Rudow.

A PROCEDURE AND A MACHINE FOR RESISTANCE WELDING. [1959] [15]p. (5 figs. diagr. omitted).
Order from LC or SLA mi$2.40, ph$3.30 59-17873

Trans. of unidentified patent PV 611.856, 15 June 51.

The procedure is characterized by the presence of a voltage of a pre-established pattern, called "the pilot voltage", the welding current following the variations of that pilot voltage and remaining proportional to it, thus permitting a close adaptation of the welding current to the peculiarities of given workpieces. The machine is characterized by a combination of a frequency

modifier, such as a cyclo-converter, with a servo-mechanism establishing a voltage error measuring the degree of disequilibration between a pilot voltage, representing the desired current pattern in the welding transformer, and a voltage (V_1) proportional to the said current in the transformer, in such a manner that, if the current in the transformer and the pilot voltage do not match, the error voltage reaches a certain value determining its action on the regulating organs of the frequency modifier, such as a cyclo-converter, the said frequency modifier reacting in an inertia-free way to any variations of amplitude or direction in the applied current, the result obtained being a welding current exactly adapted to that imposed by the pilot voltage.

TRENDS IN SCIENCE AND TECHNOLOGY IN CHINA. PT. III. INDUSTRIAL RESEARCH AND TECHNOLOGICAL PROGRESS. 23 Apr 59 [69]p. (45 figs. omitted) 93 refs. AF 1255707.
Order from LC or SLA mi$3.90, ph$10.80 59-16429

Trans. from open sources pub. in China, Hong-Kong, Japan, U. S. A., U. S. S. R., East and West Germany, Poland, Czechoslovakia and North Vietnam, 1951-1959.

USSR MATERIALS AND MATERIALS PROCESSING EQUIPMENT NO. 12, 19 AUG 59]. [1959] [61]p. 145 refs.
Order from LC or SLA mi$3.90, ph$10.80 59-19273

Trans. of unevaluated information selected from Russian-language publications.

Contents:
Chemical industry
  Industry-wide data
  Mineral deposits
  Rubber and rubber products
  Plastics and chemical fibers
  Agricultural chemicals
  Other chemicals
Chemical machinery
Petroleum and gas industries
  Regional roundups
    USSR
    RSFSR
    Transcaucasus
    Central Asia
    Ukraine
  Oil
    Production
    Drilling
    Pipelines
  Gas: reserves and deposits
Coal, peat, shale
  Production
  Mechanization
  Construction and expansion
Ferrous metallurgy
  Ore
  Iron, steel, coke
    Production and technology
    Construction and expansion
Nonferrous metallurgy
Metallurgical machinery
(See also 59-16995, 59-18398)

Bigger, Josef.
BOARDING CLAMP, tr. by CP. 9 Apr 59, 2p. (3 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-16192

Trans. of Swiss patent 259, 369, Class 4 e; applied for 4 Nov 48, registered 31 Jan 49, pub. 16 June 49.

The boarding clamp is characterized in that it has an H-shaped profile and that covering boards to be connected with one another can engage between the shanks of the clamp from both sides as far as the web so that in this way by each clamp two abutting boards can be connected with one another. It consists of two flat iron pieces and a flat iron web welded with the same at mid point of the length.

Eckartsberg, Heinz von, Juretzek, Hubert, and Mantel, Wilhelm.
EXAMPLES OF RADIOGRAPHIC EXAMINATIONS IN STEEL FOUNDRY TECHNIQUE. [1959] 8p. 4 refs. R. T. P. Trans. no. 2569.
Order from SLA mi$1.80, ph$1.80 59-17670

Trans. of Archiv für das Eisenhüttenwesen (Germany) 1938/1939, v. 12, no. 11, p. 565-569.

Epain, R.
THE STRENGTH OF HIGH-PRESSURE VESSELS. VII. AUTOFRETTED CYLINDER. VIII. RUPTURE OF THICK CYLINDERS. [1959].
Order from BISI £3 BISITS-1375

Trans. of la Metallurgie et la Construction Mécanique (France) 1958, v. 90, no. 4, p. 263, 265, 267, 269-271.

Falkevich, A. S. and Marchenko, Y. I.
TECHNIQUES AND EQUIPMENT FOR WELDING NONROTATING BUTT JOINTS IN LARGE DIAMETER PIPES. [1959] 17p. (8 figs. 3 tables omitted) 4 refs.
Order from LC or SLA mi$2.40, ph$3.30 59-17723

Manuscript trans. of unidentified [Russian] mono.

Based on the research carried out at the E. O. Paton's Institute, and the BHUUCT Welding Lab. the fundamental ground rules have been established for gas shielded automatic welding under field conditions of nonrotating butt joints of large diameter pipes. All position CO_2 welding with acceleted electrode perpendicular to the direction of travel produces welds having complete root penetration, and good weld appearance. The optimum welding procedure using 08T2CA type electrode produced good and consistent physical joint properties as required by the oil and gas pipe line welding code. The described experimental welding equipment is recommended as the basic concept for designing automatic welding machines with accessories for welding pipe lines as described in this report. It is economically sound to apply the new CO_2 automatic welding method even when using the experimental equipment in its present stage, as compared to the conventional hand welding. There is a potential economical gain in the future after further development will be made in the 2 directions: the welding procedures and equipment. (Author)

Hasimoto, H. A.
AERODYNAMIC DESIGN OF THE OPEN-HEARTH FURNACE. II. FEATURES OF FLOW IN TYPICAL DESIGNS. [1959].
Order from BISI £6 BISITS-1121

Trans. of Tetsu to Hagane (Japan) 1956 [v. 42] Dec, p. 1102-1105.

Himsel, Werner.
THE EFFECT OF THE PHYSICAL PROPERTIES OF COKE ON BLAST-FURNACE OPERATION. [1959] 13p. 6 refs.
Order from SLA mi$2.40, ph$3.30 59-17642

Trans. of Stahl und Eisen (West Germany) 1958, v. 78 [no. 18] p. 1225-1229.

Our experiment was intended to show the effect of the physical properties of coke on blast-furnace operation. The values affecting blast-furnace operation, such as composition of the burden, hot-blast pressure, and hot-blast temperature, were largely kept uniform, and freshly-made coke from one coking plant only was used. The experiment has shown that better physical properties of the coke lead to an increased hearth burden and to a better furnace operation. These results would have found a clearer expression if the coke used for the experiment would have been physically less uniform. (Author's summary)

Hoffmann, Hans.
JOINT WITH RUNNING AND FIXED FITS, tr. by C. P. 31 Aug 59, 8p. (14 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-19228

Trans. of Swiss patent 227,212 cl. 96 b, appl. 19 June 42, granted 31 May 43, pub. 16 Aug 43 (Priority: Germany 22 Aug 39).

A joint with running and fixed fits and a joint pin composed of telescoping slotted hollow bodies elastically pressed in the transition fits against the hole walls wherein the external hollow body is pushed loosely into the joint parts to be connected with one another without compression (initial stress) and the internal hollow body is then driven in with compression into the external hollow body are described. The joint is characterized in that the external slotted hollow body shows collars contacting the front walls of the joint parts and at one end is provided with one or more wedge-shaped notches through which this end is conically compressed in such fashion that together with the collar it can be pushed through the hole of the joint parts so as then to be driven through the internal slotted hollow body against the wall of the hole so that the collar will lie against the front wall of one joint part.

Inagaki, M.
WELDING CONDITIONS OF STEELS AND COOLING TIME NEAR THE FUSION LINE. PT. 2. SUMMARY OF EXPERIMENTAL RESULTS IN THE CASE OF MANUAL ARC WELDING PROCESS WITH VARIOUS COVERED ELECTRODES. [1959] 11p.
Order from ATS $16.25 ATS-04L31J

Trans. of Yosetsu Gakkai-Shi (Japan) 1959, v. 28, no. 1, p. 25-31.

Inagaki, M.
WELDING CONDITIONS OF STEELS AND COOLING TIME NEAR THE FUSION LINE. PT. 3. ESTIMATION OF COOLING TIME IN THE CASE OF MANUAL ARC WELDING WITH COVERED ELECTRODES. [1959] 11p.
Order from ATS $15.25 ATS-69L32J

Trans. of Yosetsu Gakkai-Shi (Japan) 1959, v. 28, no. 1, p. 32-38.

Inagaki, M.
WELDING CONDITIONS [OF STEELS] AND COOLING TIME NEAR THE FUSION LINE. PART 7. SUMMARY OF VARIOUS CASES OF WELDING CONDITIONS AND THE RELATION THEREOF TO THE CONTINUOUS COOLING TRANSFORMATION DIAGRAM. [1959] 9p.
Order from ATS $14.75 ATS-87L32J

Trans. of Yosetsu Gakkai-Shi (Japan) 1959, v. 28, no. 4, p. 244-249.

Karlson, N. A. F.
SET OF GAUGES, tr. by FHB. 14 May 59, 5p.
Order from LC or SLA mi$1.80, ph$1.80 59-16852

Trans. of Swedish patent 117,418, Class 42 b:17; patented from 18 Apr 44, granted 15 Aug 46, pub. 15 Oct 46.

The set is characterized in that each gauge, made in form of a parallelepiped, shows in its dimensions of height, length, and width the same measuring values in a series. The three dimensions of each gauge occur in the series with mutual intervals between them which are considerably greater than the units of the differences characteristic for the series. The three measuring values for each gauge grow in succession from one gauge to the next with the units of differences characteristic for the series, in such a manner that each gauge shows a measuring value within the lower part of the measuring range of the series, a measuring value within the upper part of the range, and a measuring value in between these ranges.

Katomin, B. N. and Rutes, V. S.
INVESTIGATION OF CONTINUOUS CASTING OF STEEL BY MEANS OF RADIOACTIVE ISOTOPES (Issledovaniye Protessa Nepreryvnoy Razlivki Stali s Pomoshyu Radioaktivnykh Izotopov). Nov 57 [15]p. 3 refs. C. T. S. no. 394.
Order from LC or SLA mi$2.40, ph$3.30 59-16986

Trans. of Akademiya Nauk SSSR. Otdeleniye Tekhnicheskikh Nauk. Izvestiya, 1957, no. 1, p. 123-135.

A study was made of the heat exchange and crystallization processes of steel during continuous casting at the Heavy Metallurgical Central Scientific Research Institute. Radioactive indicators were introduced into

the liquid phase which by their distribution in the liquid metal core fixed its position at the moment of their introduction. For an exact determination of the lowest core region or bottom, liquid lead was poured into the crystallizer simultaneously. In addition, the internal temperature in the ingot was measured to determine the time to complete crystallization of a continuously cast ingot. Relationships were established between the depth of the liquid phase (the liquid metal core), the distribution of the crystallization front and rate in the ingot, the quantity of heat removed, the drawing speed, cooling speed, the physical properties of the metal, crystallizer shape and secondary cooling method. The formation of the hard crust around the ingot in the crystallizer obeyed the same laws as the growth of the crust during the solidification of a steel casting in the mould during the initial stages of crystallization. The value of the mean solidification coefficient was determined by the entry of water into the gas-filled shrinkage gap between the ingot and the crystallizer walls, which leads to an increased crust thickness at the crystallizer exit. The thermal resistance of the gap contributes about 90 per cent of the total thermal resistance of the system. The mean solidification rate of an ingot in the secondary cooling region is independent of the rate of secondary cooling.

Khitrik, S. L. and others.
PRODUCTION OF COMPACT CARBON-FREE FERROCHROMIUM AND METALLIC MANGANESE BY VACUUM TREATMENT. [1959] 3900 words.
Order from HB $9.40 HB-4373

Trans. of Russian mono. Primeneniye Vakuuma v Metallurgiy, Moscow, 1958, p. 112-122.

Advantages of vacuum treatment for minimum blowiness in ferrochrome (max. 0.09% C) and manganese buttons, over other methods. Gas sampler for liquid ferrochrome and Batalin's device for gases remaining in metal after solidification. Quantity and composition of gases in low-C ferrochromium. Setup for industrial vacuum treatment of ferroalloys at a Russian works. Dusts on tank wall. Optimum vacuum in tank; results of using vacuum-treated Fe-Cr in steelmaking ... (HB abstract)

Kurchman, B. S.
PRECISION CASTING. [1958] [198]p. 19 refs.
F-TS-9069/V.
Order from OTS $3.00 59-11937

Trans. of Tochnoye Lit'ye, Moscow, 1954.

This handbook is written as a training text for the shop workman. The following topics are discussed: a brief description of technological progress of precision casting; dies for pattern making; making meltout patterns; cleaning the patterns and assembly of blocks; the facing layer of the mold; molding disposable patterns; meltout of pattern material from the mold, drying and firing the molds; electric steel-smelting furnaces in foundry shops; melting of metal and pouring molds; knockout, trimming, and cleaning the casting; spoilage in precision casting, quality control, and measures of reducing spoilage; degree of accuracy and finish of disposable pattern castings; and organization of precision casting (shop layout, technical documentation, safety regualtions, and measures for increasing productivity).

Lenhart, Ernst.
TUBE EXPANDER, tr. by J. C. Levy. 18 May 59, 14p. (4 figs. omitted).
Order from LC or SLA mi$2.40, ph$3.30 59-16839

Trans. of German patent 749,639, Class 7c, Group 20; patented from 23 Nov 39, granting announced 4 May 44, pub. 28 Nov 44.

This invention relates to a tube expander wherein, when the initial rolling position is attained in dependence on the torque, the bearing sleeve is axially coupled with the roll mandrel by means of a spring-actuated clutch coupling or the like, and consists therein that the bearing sleeve is comprised of two bushings that are capable of displacement within each other and are spread apart by means of a spring on the mandrel feed in correspondence with the starting expansion, and are held by means of a weaker contact spring under sustained pressure against the tube end or the tube plate. (Extracted from the report)

Löfblad, B. and Lindh, G.
DEVELOPMENT OF A WELDED CONNEXION BETWEEN FERRITIC AND AUSTENITIC SUPERHEATER TUBES FOR STEAM POWER PLANTS. [1959].
Order from BISI 4 BISITS-1409

Trans. from International Institute of Welding. [Annual Assembly] Vienna, 1958, 30 June [Proceedings].

A new method of making weld joints between ferritic and austenitic materials in superheater tubes is developed. For the welding an intermediate piece of an alloy with high nickel content is used. This alloy has about the same chromium content as the ferritic material, and its carbon is stabilized with niobium or some other suitable carbon stabilizer. Test and examinations show that the mean value of the coefficient of thermal expansion of this alloy for the temperature interval of 20-600°C lies approximately in the middle between the corresponding values for the ferritic and austenitic steels. Calculations show that because of this considerably smaller stresses arise in a weld joint made with an intermediate piece than in a joint with direct welding of the ferritic and austenitic steels. Microscopic examinations of long-time annealed material show that the nickel alloy prevents carbon diffusion from the ferritic material. The results of tensile test at room temperature and stress rupture test at 600°C are shown. (Author's summary).

Marabini, Ruggero.
REMOTE-CONTROL HYDRAULIC PINCH VALVE FOR LIQUIDS, GAS, FLUIDIZED POWDER, MUD, AND DRY INCOHERENT GRAINS. 14 Aug 59, 5p. (4 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-19227

Trans. of Italian patent 546,891, appl. 23 Dec 55, pub. June 57.

The pinch valve is characterized by a resilient tubular element (sleeve), heat-resistant, enclosed in a rigid body so as to form a compression chamber in which it is possible to feed a liquid, at such pressure as to bring about the progressive squeezing of the sleeve until total closure is reached. The resilient sleeve, at its widest open position, is endowed with an initial squeezing, either by means of pressure by suitable organs incorporated or introduced into the valve body, or by stamping the sleeve itself as a median elliptical, or at least not circular, section. Or it may have non-uniform thickness, such that the resilient reaction of the sleeve to the uniform external pressure will not be uniform in all directions.

Portevin, Albert.
DEFINITION AND CLASSIFICATION OF CASTING DEFECTS OF METALLURGICAL ORIGIN. [1959] [28]p. (18 figs. 1 table omitted) 20 refs.
Order from SLA mi$2.70, ph$4.80 59-17813

Trans. of unidentified French mono.

A lecture, given on May 23, 1950, to the Association Technique de Fonderie.

Spenle, E. A.
EXPERIENCE AND KNOWLEDGE GAINED FROM THE OPERATION OF A HOT WIDE-STRIP MILL AND A COLD-STRIP MILL. [1959].
Order from BISI £7 10s BISITS-1366

Trans. of Stahl u[nd] Eisen (West Germany) 1959, v. 79, 14 May, p. 683-693.

Tetzner, H.
SLAG EXPLOSIONS IN OPEN-HEARTH STEEL-WORKS. [1959].
Order from BISI £4 5s BISITS-1393

Trans. of Neue Hutte (East Germany) 1959 [v. 4] June, p. 352.

Vogl. H.
TRENDS IN THE DEVELOPMENT OF AUTOMATIZATION. [1959].
Order from BISI £4 10s BISITS-1359

Trans. of Stahl u[nd] Eisen (West Germany) 1958, v. 78, 24 July, p. 1033-1038.

Vogt, Alois.
PROCESS OF PRODUCING SURFACE LAYERS OF HIGH ELECTRICAL CONDUCTIVITY AND GREAT MECHANICAL ADHESIVE POWER, AND SURFACE LAYER PRODUCED THEREBY, tr. by J. C. Levy. 8 May 59, 4p.
Order from LC or SLA mi$1.80, ph$1.80 59-16856

Trans. of Swiss patent 299,720, Class 44b; applied for 23 June 51, registered 30 June 54, pub. 1 Sep 54.

The process is characterized in that first a thin layer of copper is vaporized onto the support in high vacuum and then a noble metal layer is in turn vaporized onto the copper layer under maintenance of the high vacuum.

Voronov, I. I.
METHODS OF PRODUCING WIRE DRAWING DIES (Sposoby Izgotovleniya Volok). Dec 57 [3]p. C. T. S. no. 400.
Order from LC or SLA mi$1.80, ph$1.80 59-18521

Trans. of *Metallurg (USSR) 1956, no. 6, p. 36.

Zillmer, E.
THE PREVENTION OF GASSING ACCIDENTS IN IRON AND STEELWORKS. [1959].
Order from BISI £4 5s BISITS-1385

Trans. of Stahl u[nd] Eisen (West Germany) 1959, v. 79, 30 Apr, p. 629-634.

Transport, Traction and Hoist Facilities

Gerasimets, A.
OVER THE SIBERIAN EXPANSE (Nad Prostorami Sibiri). 19 Feb 59 [5]p. AF 1255560
Order from LC or SLA mi$1.80, ph$1.80 59-16324

Trans. of Grazhdanskaya Aviatsiya (USSR) 1958, no. 7, p. 4-5.

The development of aviation in Eastern Siberia is reviewed in order to evaluate present achievements.

Kutzback, Karl.
SYNCHRONOUS JOINTS FOR SHAFT TRANSMISSIONS, CAPABLE OF TRANSVERSE AND ANGULAR DISPLACEMENT. [1959] 11p. (23 figs. 2 tables omitted) 5 refs.
Order from SLA mi$2.40, ph$3.30 59-17838

Trans. of V[erein] D[eutscher] I[ngenieure]. Zeitschrift (Germany) 1937, v. 81, no. 30 [p. 889-892].

By an investigation of the technical transmission principles involved, the laws of motion of the joints and the conditions of synchronous motion are determined, in order to obtain a basis from which one can evaluate customary forms of design and obtain principles guiding the development of new designs. (Author)

Lavryent'yev, V. B.
METHOD OF IMPROVING THE ROADABILITY OF WHEELED MOTOR VEHICLES (Sposob Povichyeniya Prokhogimostl Kolyosnikh Avtomobilyey) tr. by Vawryk. [1959] 6p. (6 figs. omitted). H-3708.
Order from OTS $0.50 59-21093

Trans. of Avtomobil'naya Promyshlennost' (USSR) 1958, no. 12, p. 13-15.

Maduschka, L.
DESIGN OF THE SCREWED JOINT OF CRANE HOOKS IN CORRECT RELATION TO THE STRESSES ENCOUNTERED. [1959].
Order from BISI £4 BISITS-1368

Trans. of Stahl u[nd] Eisen (West Germany) 1959, v. 79, 28 May, p. 797-802.

Malyshev, G. A.
BUS BODY MADE OF PANELS (Avtobusnyy Kuzov iz Paneley) tr. by S. E. [1959] 4p. (1 photo omitted) H-3739.
Order from OTS $0.50 59-21070

Trans. of Avtomobil'naya Promyshlennost' (USSR) 1958, no. 11, p. 46.

A bus without framework and consisting of individual panels has been designed and patterned after the GAZ-51 truck at the Moscow Plant "Aremkuz". A tabulation is presented which compares the characteristics of the new bus with that of similar buses. The "Aremkuz" bus can carry up to 40 passengers. It is powered by the usual GAZ-51 carburetor engine, rated at 70 hp.

MATERIALS

Brandenberger, E.
NON-DESTRUCTIVE MATERIAL TESTING. [1959] 10p. 2 refs. R.T.P. Trans. no. 2559.
Order from SLA mi$1.80, ph$1.80 59-17668

Trans. of Schweizer Archiv [für Angewandte Wissenschaft und Technik] (Switzerland) 1942, v. 8, no. 5, p. 157-165.

Cammerer, J. S.
LES MATIÉRES MOUSSEUSES MODERNES POUR L'ISOLATION CONTRE LA CHALEUR ET LE FROID, tr. by Brosse. 5 June 59 [14]p. 5 refs. Trans. no. A 385 (text in French).
Order from SLA mi$2.40, ph$3.30 CEA-tr-A385 (59-17641)
Trans. in French of Kaltetechnik (West Germany) 1957, v. 9, no. 6, p. 175-177.

Carlander, A. T.
PRESS INSTALLATION FOR MOLDING AND VULCANIZING ARTICLES, PARTICULARLY RUBBER HEELS. 1 July 59, 12p. (2 figs. omitted).
Order from LC or SLA mi$2.40, ph$3.30 59-18793

Trans. of Swedish patent 109,975, cl. 39a: 11 08, pat. from 31 Dec 40, pub. 7 Mar 44 (Priority: Denmark, 11 Dec 40) by Helsingborgs Gummifabriks Aktiebolag, Sweden.

Kevesh, P. D.
STORAGE OF CLINKER AND PORTLAND CEMENT. [1959] 10p.
Order from LC or SLA mi$1.80, ph$1.80 59-17695

Trans. of Tsement (USSR) 1936, v. 4, no. 4, p. 31-36.

Papadakis, Michel.
RHEOLOGY IN THE CEMENT INDUSTRY. CONCULSION. [1959] 10p.
Order from SLA mi$1.80, ph$1.80 59-17648

Trans. of Silicate Industriels (Belgium) 1957, v. 22 [no. 12] p. 675-681.

Petz,, A[lbert].
MODERN PLASTICS AS RAW MATERIALS FOR ADHESIVES. [1959] [9]p. 4 refs. R. T. P. Trans. no. 2396.
Order from SLA mi$1.80, ph$1.80 59-17678

Trans. of Kunststoffe (Germany) 1942, v. 32, no. 2, p. 49-54.

Takagi, Michiyasu.
THEORY OF DUMET-TO-GLASS SEALING. [1959] 16p. 4 refs.
Order from SLA mi$2.40, ph$3.30 59-17451

Trans. of Toshiba Review (Japan) 1950, v. 5, no. 4/5, p. 33-38.

Hull and Burger investigated photoelastically the internal stress induced by sealing in glass and found Poritsky's theory holds good generally. But the case of Dumet wire has not been dealt with sufficiently on account of complexity of analysis due to the non-elastic behavior of the copper sheath. By applying the theory of plasticity in addition to that of elasticity, the present writer calculated the thermal expansion of Dumet wire and the internal stress in the glass sealed to it, and found the results obtained are in good agreement with the experiment by Hull and Burger. The effect of plastic flow of glass are also calculated in some special cases. (English abstract in the original paper)

Zabezhinskiy, Y. L., Ratinov, V. B., and Rozenberg, T. I.
ON THE CRYSTALLISATION MECHANISM OF THE SETTING OF GYPSUM CEMENTS (O Kristallizatsionnom Mekhanizme Tverdeniya Gipsovikh Vyazhushchikh Veshchestv). Jan 58 [5]p. 12 refs. C.T.S. no. 395.
Order from LC or SLA mi$1.80, ph$1.80 59-18519

Trans. of Akademiya Nauk SSSR. Doklady, 1956, v. 108, no. 6, p. 1137-1139.

Fuels, Lubricants, and Hydraulic Fluids

Chang, Lo-Fung and Lu, Pei-Chang.
A SCHEME FOR THE ANALYSIS OF LIQUID FUEL PRODUCTS OBTAINED BY SYNTHESIS WITH CARBON MONOXIDE AND HYDROGEN. [1959] 29p. 20 refs.
Order from LC or SLA mi$2.70, ph$4.80 59-18372

Trans. of Jan Liao Hsüeh Pao (Chinese People's Republic) 1957, v. 2, no. 1, p. 39-51.

Laillet, Charles, Chaix, Anthelme and Chenail, Jules.
PROCESS FOR THE PRODUCTION OF A SYNTHETIC FUEL, tr. by PCC. 4 May 59, 3p.
Order from LC or SLA mi$1.80, ph$1.80 59-16830

Trans. of French patent 621,728, Group XV, Class 3; applied for 21 Jan 26, granted 12 Feb 27, pub. 16 May 27.

The purpose of this patent is to produce an acyclic (open-chain hydrocarbon) synthetic fuel admixed with cycloformene and naphthene carbides by distillation in a closed vessel of any organic material and injection of superheated vapors of a suitable organic solvent, such as acetone, common and petroleum ethers, alcohols and ethers thereof (acetic and formic), benzene and benzene carbides, toluene, solvent naphtha, chloroform, and chlorine-containing derivatives of ethane and ethylene, carbon sulfide and tetrachloride, ligroin, gasoline, oil cracking products, products obtained from the hydrogenation of naphthalenes, phenols, tetralin, dekalin, cyclohexanol, etc. The invention is characterized in that the organic materials (animal, vegetable and mineral) are first put in grain or dust form and then treated with the superheated vapors of a liquid solvent injected under normal pressure (760 mm) until a temperature of 450 to 500°C is obtained in the retort or distillation apparatus. The materials are introduced in the retort with a deoxidation product of any type in order partly or totally to neutralize the oxygen without absorbing the free or combined hydrogen contained in the cells of the organic material by the dissolving action of a substance capable of determining said action and inducing contact reactions. (Extracted from the report)

Ragozin, N. A. and Vorob'yeva, A. F.
JET ENGINE FUELS AND FIRE HAZARDS (Ogneopasnost' Reaktivnykh Topliv). 18 Feb 59 [13]p. 8 refs. AF 1255528.
Order from LC or SLA mi$2.40, ph$3.30 59-16322

Trans. of Khimiya i Tekhnologiya Topliv i Masel (USSR) 1958 [v. 3] no. 4, p. 39-46.

Explosion limits relative to altitude were established for fuels T-1, TS-1, T-2, a kerosene-type fuel, and B-70. Altitudes (vacuum pressure values) at which supersaturated, hence, unstabilized explosive vapor-air mixtures are produced by these fuels were determined. The autogenous ignition temperatures of the fuels, and metal surface temperatures capable of producing fuel ignition on contact were determined. A correlation between fuel flash point and fuel vapor pressure was established. (Author)

Yudin, I. D.
THE DEGREE OF GASIFICATION OF COAL IN THE UNDERGROUND GAS GENERATORS OF THE KUZBASS. [1959] 2p. 6 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-16736

Trans. of Podz[emnaya] Gaz[ifikatsiya] Ugley (USSR) 1958, no. 2, p. 31.

Leather and Textiles

Groebe, Anneliese and Klare, Hermann.
THE ACTION OF BIVALENT CATIONS ON CELLULOSE XANTHATE GELS. Nov 58 [24]p. (35 illus. omitted) 9 refs.
Order from SLA mi$2.70, ph$4.80 59-17444

Trans. of Faserforschung und Textiltechnik (Germany) 1958, v. 9, no. 7, p. 262-272.

The diffusion of Cd-ions in a cellulose xanthate gel filament is observed microscopically in the formation of a shifting limiting line, which is photographically recorded. The diffusion of the Cd-ions was investigated in dependence upon their concentration and in dependence upon the acid and salt contents of the solutions penetrating by diffusion. The ripeness and dehydration conditions of the cellulose xanthate gel have also been varied. It was shown that there exists a dependence of the diffusion of Cd-ions upon the factors referred to. The limiting line is maintained in the cellulose hydrate state and separates two regions in the gel filament which, upon dyeing, behave like the skin and core of an industrial fibre. It was possible to prove the theoretical views concerning the effect of bivalent cations in the spinbath on the formation of skin and core by means of experiments. (Author's summary)

Larsson, Nils.
PROCESS FOR THE PRODUCTION OF A LEATHER SUBSTITUTE FOR USE AS VAMP FOR HEAVY FOOTWEAR, E. G., WOODEN SHOES AND THE LIKE, tr. by PCC. 7 May 59, 2p.
Order from LC or SLA mi$1.80, ph$1.80 59-16846

Trans. of Norwegian patent 29,615, Class 8h; patented from 16 Aug 17, pub. 31 Mar 19.

A process for the production of a leather substitute designed for use in heavy footwear, for example in wooden shoes and the process is characterized in that a mixture of mineral oil and gypsum is applied to the base material, said mixture being coated on the material and pressed thereon in a conventional manner under heat, after which the surface is varnished.

Paints and Finishes

Kappelmeier, C. P. A. and Mostert, J.
DETERMINATION OF POLYALCOHOLS IN PAINT VEHICLES. [1959] 3p. [refs. omitted].
Order from SLA mi$1.80, ph$1.80 59-17570

Trans. of Peint[ures] Pig[ments] Vernis (France) 1958, v. 34, no. 7, p. 309-310.

Alkyd resins used in paint vehicles contain various polyvalent alcohols. By one method of ammonolysis using B-phenylethylamine, pentaerythritol and trimethylolethane are separated, while trimethylolpropane remains in the solution of glycerine. Complete quantative analysis of a mixture requires certain precautions. (Author)

Sandermann, W., Casten, R. and others.
INVESTIGATIONS ON OILY PRESERVATIVES AGAINST BLUE STAIN. Communication no. 9 on Studies in the Field of Wood-Protective Chemistry. Mar 59, 11p. (13 figs. 4 tables omitted) 24 refs. Trans. no. 124.
Order from NRCC NRCC C-2992

Trans. of Holzforschung und Holzverwertung (Austria) 1958, v. 10, no. 4, p. 57-65.

Priming materials on an oily base which contain such organic agents as pentachlorophenol or chloronaphthaline tend to evaporate quickly with consequent loss of protection against blue stain. Lacquer inhibits evaporation to a small extent, and also appears to fix the preservative. Salicylic acid anilide and phenyl mercuric acetate were the most effective of the various presevatives tested.

Photographic Materials

Falta, Wolfgang.
G. EBERHARD AND THE PHOTOGRAPHIC EBERHARD EFFECT I [AND II]. [1959] [8]p. 15 refs. A. E. R. E. Lib/Trans. 478.
Order from SLA mi$1.80, ph$1.80 59-17325

Trans. of die Photographische Industrie (Germany) 1940, v. 38, nos. 11 and 12, p. 159-160 and 174-175.

Veydenbakh, V. A.
PROCESS OF DIFFUSION TRANSFER OF PHOTOGRAPHIC IMAGES. [1959] 9p. 39 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-17601

Trans. of Zhurnal Nauchnoy i Prikladnoy Fotografii i Kinematografii (USSR) 1958, v. 3, no. 4, p. 306-310.

A literature review.

Plastics

Chatain, Michel.
RELATIONS BETWEEN THE PROPERTIES AND THE METHODS OF MOLDING OF THERMOPLASTICS. [1959] [37]p. 8 refs.
Order from SLA mi$3.00, ph$6.30 59-17738

Trans. of Industrie des Plastiques Modernes (France) 1958, v. 10, May, p. 45-53.

Müller, Erwin, Bayer, Otto and others.
ON NEW TYPES OF HIGHLY ELASTIC SUBSTANCES "VULCOLLAN" (II) (Uber Neuartige Hochelastische Stoffe "Vulcollan" (II)). Communication no. 9 on Polyurethanes. [1959] [14]p. (3 tables, 13 formulas, 2 figs. omitted) 10 refs. No. 257.
Order from SLA mi$2.40, ph$3.30 59-17910

Trans. of Angewandte Chemie (West Germany) 1952, v. 64, no. 19/20, p. 523-531.

In the sixth communication on polyurethanes it was described that linear polyesters out of adipic acid and simple glycols can be simultaneously elongated and carried over into so-called "isocyanate polyesters" (which carry isocyanate groups at their ends) by an excess of diisocyanates, above all by naphthylene-1.5-diisocyanate. Now whereas at that time the cross-linking to rubber-elastic plastic (Vulcollan) was undertaken with water, the present work deals with other cross-linking media, as, for instance, glycols, amino alcohols, diamines, and other bifunctional compounds. The cross-linking mechanism is discussed for each case; it is shown that the chemical nature of the cross-linking medium has a substantial influence on the properties of the Vulcollan. The indicated methods show new ways of processing; in particular a solvent-free casting of Vulcollan has become possible. (Author) (See also 59-15983)

Wood and Paper

DEBARKING DRUM APPARATUS. 29 Apr 59, 3p. (1 illus. claims omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-16849

Trans. of Norwegian patent 91,382, cl. 38 i-1, pat. 8 Feb 58, appl. 23 Aug 56, pub. 8 Apr 58 (Priority: Sweden, 27 Aug 55) by Waplans Mekaniska Verkstads Aktiebolag, Norway.

The invention is mainly characterized in that at least a part of the debarking cutters has the shape of pipes which are sealed at their ends and which are made and arranged in such a way with respect to the direction of rotation of the drum that they are filled with water when in its turning motion the drum drops into the water basin while the water flows from the pipes along against the drum when the pipes at the rotation of the drum rise upward above the water level in the basin,

in order to increase the spraying of the wood with water in the debarking. (Extracted from the report)

DEBARKING MACHINE FOR SPLIT PIECES OF WOOD, tr. by F. H. B. 20 Feb 59, 8p. (10 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-14205

Trans. of French patent 1,160,152, gr. 5, cl. 4, pat. 24 Feb 58, appl. 6 Nov 56, pub. 8 July 58, by S.A.I.C.I. (Societa Agricola Industriale per la Cellulosa Italiana) Italy.

The device consists essentially of (1) an endless horizontal conveyor on which split pieces of wood are loaded with the bark turned upward, (2) gripping elements, designed to make the split pieces of wood integral with the conveyor during their transport, and (3) a plurality of cutting elements rotating by machine power, which are arranged along the path of the conveyor and mounted in such a way as to move while adjusting themselves to the shape of the bark to be removed during the advance of the split wood. Means are provided for keeping these gripping elements automatically in operation during the debarking process and to put these elements out of operation when the process is finished.

SUCTION ROLLER FOR PAPER OR CARDBOARD (-MAKING) MACHINE, WITH ROTATING PERFORATED CASING AND AN INTERIOR SUCTION CHAMBER, tr. by C. S. T. 4 Feb 59, 3p. (2 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-14207

Trans. of German patent 229634, 2 Feb 1911, by Firma J. M. Voith, Heidenheim.

An arrangement is provided for varying suction at different points along the circumference of the roller. The inner chamber either has several divisions in which differing degrees of suction are produced, or various separated suction chambers are arranged side by side.

Asten, Eduard von.
ASBESTOS AND METAL-WIRE DRYING FELT FOR PAPER AND PULP MACHINES, tr. by PCC. 8 May 59, 3p.
Order from LC or SLA mi$1.80, ph$1.80 59-16847

Trans. of Norwegian patent 32,626, Class 55d; patented from 10 June 20, pub. 4 July 21; corresponding German patent 317,376, patented from 22 Oct 16, pub. 31 May 20.

The object of the invention is a drying felt consisting of asbestos and metal wire for paper and pulp machines. The asbestos forms the upper side and provides a smooth surface whose shape does not mark the paper web. The metal wire provides a firm support for the web. The new drying felt is not damaged by heat or humidity, and the volume thereof is not affected as heretofore. On the contrary, such drying felts always move uniformly and no adjustment is required during operations. (Extracted from the report)

Bjørnrud, Ole.
METHOD AND MACHINE FOR DEBARKING ETC. OF SMALL WOOD, tr. by FHB. 11 May 59, 6p. (claims omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-16848

Trans. of Norwegian patent 91,156, Class 38i-1, International classification B 27 1; patented from 11 Jan 58, applied for 23 Oct 54, pub. 10 Mar 58.

The essential feature of the method is that the wood is subjected to a partial crushing, whereby a substantial portion of the water present in the raw wood is pressed out, while at the same time the bark is loosened and easily removed by scraping devices.

Egner, K.
STUDY OF (WOOD) FIBRES DAMAGED BY ACID HARDENED SYNTHETIC-RESIN GLUES (Sichtbarmachung von Faserschädigungen durch Sauer Ausgehärtete Kunstharzleime). [1959] [7]p. (8 figs. omitted) 1 ref. Trans. no. 4282.
Order from SLA mi$1.80, ph$1.80 59-15250

Trans. of Holz-Zentralblatt (Germany) 1952, no. 135, p. 1857-1858.

Thin wood chips, coated with liquid solutions of phenolic resins which were set at room temperature showed, after being subject to hot humid air conditions, to have suffered strong acid damage. This was noted mainly from discolorations and fibre failures of the folds. Fibre damage to a smaller degree was found with urea glues. No fibre damage could be detected after using resorcinol resins when the coated chip specimens reacted like the uncoated control specimens. Dry hot storage caused only a slight discoloration and no fold failures were detectable. It appears, therefore, that the effect of high temperatures without a simultaneous high air humidity, at least for low wood moisture content, does not cause any considerable damage to the fibres, even in the case of strong acid hardened phenolic resins. On the other hand, failures can almost certainly be expected under hot humid air conditions. It is probable also that timbers with high moisture content are more prone to acid damage than dry timbers.

Janson, L.
AN APPARATUS FOR DETERMINATION OF THE HEAT CONDUCTIVITY OF CAST IRON CYLINDERS. Aug 59, 5p. (4 figs. omitted) 2 refs.
Order from SLA mi$1.80, ph$1.80 59-17650

Trans. of Svensk Pappers-tidning (Sweden) 1959, v. 62, no. 7, p. 241-244.

Jayme, Georg and Hunger, G[unther].
STEREOSCOPIC ELECTRON MICROSCOPY IN PULP AND PAPER. Sep 59, 2p. (12 figs. omitted)
Order from SLA mi$1.80, ph$1.80 59-20048

Trans. of photo captions of Holzforschung (Germany) 1959, v. 13, no. 1, p. 1-6.

Kubát, Josef.
SOFTENING AGENTS FOR PAPER (Mjuxgöringsmedel for Papper. [1959] [12]p. 78 refs.
Order from SLA mi$2.40, ph$3.30 59-17816

Trans. of Svensk Pappers-tidning (Sweden) 1950, v. 53, no. 21, p. 694-697.

A survey from the literature is presented which shows that softening agents for cellophane and certain other types of regenerated cellulose are in many cases active also as softening agents for paper.

Lyche, Leo A.
AIR DRYING CHAMBER ARRANGEMENT FOR PAPER, PULP, WOOD PULP, AND CELLULOSE IN THE FORM OF CONTINUOUS WEBS, tr. by PCC. 12 May 59, 5p.
Order from LC or SLA mi$1.80, ph$1.80 59-16845

Trans. of Norwegian patent 25,744, Class 55d; patented from 20 Apr 14, pub. 6 Apr 15.

According to the invention, the drying is effected by means of hot air which is caused to flow along the moving paper web and in direct contact therewith in superposed closed chambers. Each of these individual chambers is limited at the bottom by a paper web conveyed on a felt, at the top, by a portion of the conveyor felt and, at the ends of the freely suspended paper web during the passage thereof from one conveyor belt to another, the lateral limit of the chamber being provided by the side walls thereof. The hot drying air is conventionally introduced at one of the ends of each of these chambers and exhausted at the other to the amount and at the temperature and speed determined by the humidity of the paper and the speed of the machine. (Extracted from the report)

Lysell, Odd.
DEVICE FOR DEBARKING MACHINES, tr. by FHB. 28 Apr 59, 3p. (claims omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-16850

Trans. of Norwegian patent 91,441, Class 38 i-1, International classification B 27 1; patented from 15 Feb 58, applied for 30 Nov 55, pub. 14 Apr 58.

The invention relates to debarking machines of the type in which the machine, which is driven by a small motor, is led along the log by hand, preferably for so-called motor-driven debarking spades. The rear part of the machine is provided with a spike or the like, which when the machine is slid backwards by the reaction force, is somewhat pressed down in the surface of the log and thus absorbs the pressure which would otherwise be transmitted to, and absorbed by, the arms of the operator. The spike is resiliently mounted on the machine, so that an excess load to the motor is avoided.

Maruta, Sadatomo and Yamamoto, Kumeo.
STUDIES ON THE PREVENTION OF YELLOWING CAUSED BY RESIN TREATMENT OF PAPER. [1959] 19p. 5 refs.
Order from SLA mi$2.40, ph$3.30 59-17087

Trans. of Kami Parupu Gijutsu Kyokai-Shi (Japan) 1958, v. 12, no. 84, p. 169-173.

Today, many mills are manufacturing wet-strength papers with melamine- or urea-formaldehyde resins. But, when a bleached pulp is used, the whiteness of paper is slightly lowered with acid colloid resin treatment (yellowing of paper), so we carried out many tests and we found that, (1) Six kinds of organic or inorganic acid colloid resins were used and when a lactic or phosphoric acid colloid resins were used, no yellowing occurred. (2) The yellowing of paper caused by acid colloid resin treatment is prevented with use of chelating agents (polyphosphate, E. D. T. A., etc.) (English abstract in the original article)

Munzinger-Schenker, Konrad.
ENDLESS FELT WITH REINFORCING INSETS AND PROCESS OF PRODUCING SAME, tr. by PCC. 8 May 59, 3p. (4 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-16829

Trans. of Austrian patent 35,642, Class 55b; applied for 15 July 07, in effect from 15 July 08, pub. 28 Dec 08.

Ogait, Alfred.
DETERMINATION OF YIELD OF SPRUCE AND BEECH SULPHITE PULPS BY MEANS OF D. P. MEASUREMENT. [1959] [17]p. 17 refs.
Order from SLA mi$2.40, ph$3.30 59-20052

Trans. of das Papier (West Germany) 1958 [v. 12] no. 7/8, p. 126-136.

Earlier investigations (Das Papier 7: 471, [illegible]bout a relationship between D. P. of unbleached spruce-sulphite pulps and yield of bleached pulp were supplemented and extended to beech pulps as well. These investigations indicated a linear relation between D. P. and yield - as existing for spruce pulps. Such a correlation exists for beech pulps too, but is limited in this instance to D. P. values below 1500. After considering this relation theoretically, a method for determination of yield and various possibilities of industrial application of the D. P. methods, its accuracy and sources of error are elucidated.

[Schmidt, K. Gerhard].
TRANSPARENCY AND REFLECTANCE OF PAPER; THEORY AND MEASURING METHODS, tr. by Carl Demrick. [1959] [23]p. (3 equations omitted) 11 refs.
Order from SLA mi$2.70, ph$4.80 59-20101

Trans. of das Papier (West Germany) 1959, v. 13, no. 7/8, p. 141-149.

Skogsberg, Bengt August and Larsson, Erik Natanel.
MACHINE FOR DEBARKING BULK WOOD AND THE LIKE, tr. by FHB. 5 May 59, 6p. (2 figs. and claims omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-16851

Trans. of Norwegian patent 92,290, Class 38 i-1, International Classification B 27 1; patented from 15 Apr 58, applied for 15 Mar 55, pub. 18 Aug 58. Priority claimed on basis of application filed in Sweden 18 Mar 54.

The machine provided by the invention is constructed in such a way that it travels by means of, and is driven by, a tractor and is of the type in which by means of an inclined feeding wheel the bulk log is made to rotate and simultaneously to advance in longitudinal direction, and the log while advancing is debarked by means of a rotating cutter which, resting on the log, can move up and down, and that as special characteristic of the invention a unit is provided which is constructed so as to be connected with the rear part of the tractor and consists of a transversal beam in the approximate center of which there is a frame pivotable around a vertical shaft and equipped with horizontal shafts for two feeding wheels, one on each side of the beam, further that in the ends of the beam curved supports for the log to be debarked, movable in longitudinal direction of the beam, expediently equipped with rollers, are provided, and the feeding wheels are mounted so as to be driven from the power source of the tractor by way of a joined transmission gear which permits pivoting of the same. (Extracted from the report)

Vinetskaya, Ye. Ya.
ADSORPTION METHOD FOR DETERMINING THE SPECIFIC EXTERNAL SURFACE OF PULP SUSPENSIONS DURING BEATING (Adsorptsionnyy Metod Opredeleniya Udel'noy Vneshney Poverkhnosti Vzvesi Tsellyulozy v Protsesse Razmola). [1959] 12p. 8 refs. Trans. no. 4195.
Order from SLA mi$2.40, ph$3.30 59-17751

Trans. of Bumazhnaya Promyshlennost' (USSR) 1958, v. 33, no. 4, p. 6-9.

We propose a quick, objective method of determining specific external surface of fibre suspensions during beating. We show that the fibre's adsorbability increases with beating time and that increased adsorption x/m of a colloidal Congo solution can be utilized as a determinant of specific external surface of sulphite pulp fibre during beating. We have determined specific external surface of sulphite pulp during beating for various types of rolls. The curve which plots the ratio S f(t) gives the optimal times necessary to obtain well-fibrillated fibres. It makes possible proper control over beating processes in various types of machines. (Author's conclusions)

MATHEMATICS

Berger, E. R.
HARMONIC ANALYSIS OF DISCRETE NUMERICAL SERIES. [1959] 5p. 3 refs. R. T. P. Trans. no. 2388.
Order from SLA mi$1.80, ph$1.80 59-17717

Trans. of Z[eitschrift für] A[ngewandte] M[athematik und] M[echanik] (Germany) 1942, v. 22, no. 5, p. 269-272.

A method is described for the instrumental determination of the coefficients of trigonometric interpolation using the known factors of diminution. A relation is obtained for the coefficients of the interpolation of the k - th order, by means of which the diminution factor ρ_k can be easily calculated. Finally the formulae are given by means of which the harmonic analyser can be applied also for harmonic synthesis. (Author)

Bilharz, H[erbert].
NOTES ON A CONTROLLED TYPE OF UNIDIMENSIONAL MOTION. [1959] 13p. 11 refs. R. T. P. Trans. no. 2389.
Order from SLA mi$2.40, ph$3.30 59-17718

Trans. of Z[eitschrift für] A[ngewandte] M[athematik und] M[echanik] (Germany) 1942, v. 22, no. 4, p. 206-215.

An explicit statement is given of the periodic solutions of the ordinary nonlinear differential equation

$$\ddot{x} + 2\lambda x + \mu x + \gamma \operatorname{sgn}(x + \rho\dot{x}) = 0,$$

in which $x(t/\rho)$ is a real, doubly intermittent, continuously differentiable function of an independent variable $t \geq 0$ and a real parameter ρ, where $-\infty < \rho < \infty$, $\dot{x} = dx/dt$, $\ddot{x} = d^2x/dt^2$, and $\gamma > 0$, $\lambda > 0$, and $\mu > 0$ are constants. The stability conditions are investigated for the rectilinear motion of a material point acted upon by a generalized unsteady force

$$f(x, \dot{x} | \rho) = -2\lambda x - \mu x - \gamma \operatorname{sgn}(x + \rho\dot{x}),$$

this type of motion being characteristic of certain perfectly automatic mechanical systems possessing one degree of freedom. For $u = 0$ in the first equation above, imperfectly automatic controls may produce better results.

Computing Devices

Bazilevskiy, Yu. Ya.
THE UNIVERSAL ELECTRONIC CALCULATING MACHINE "STRELA" (Universal'naya Elektronnaya Vychislitel'naya Mashina "Strela"). Jan 58 [13]p. C. T. S. no. 381.
Order from LC or SLA mi$2.40, ph$3.30 59-18526

Trans. of Priborostroyeniye (USSR) 1957, no. 3, p. 1-7.

Discussions are presented on: The structure of the machine; the representation of numbers and orders; the operations and order system; and control and routines.

Korolev, L. N.
CODING AND CODE COMPRESSION, tr. by Morris D. Friedman. [1959] 4p. 1 ref.
Order from LC or SLA mi$1.80, ph$1.80 59-16342

Trans. of Akademiya Nauk SSSR. Doklady, 1957, v. 113, no. 4, p. 746-747.

MECHANICS

Skopets, M. B.
AN APPROXIMATE METHOD OF CALCULATING A TURBULENT BOUNDARY LAYER IN THE PRESENCE OF HEAT EXCHANGE, tr. by J. B. Sykes. 1955 [18]p. 7 refs. A. E. R. E. Lib/Trans. 591.
Order from SLA mi$2.40, ph$3.30 59-17492

Trans. of Zhurnal Tekhnicheskoy Fiziki (USSR) 1955, v. 25, no. 5, p. 864-876.

Of the semi-empirical methods at present existing for the calculation of an isothermal turbulent boundary layer in an incompressible gas, the most simple and convenient is that proposed by Loitsyanskii. This method is based on the use of the momentum equation and on the hypothesis of an analogy between laminar. A method is proposed for calculating a non-isothermal turbulent boundary layer in an incompressible gas, for the case of both small and large excess temperatures. This method is essentially a generalization of L. G. Loitsyanskii's (Priklad. Mat. i Mekhan. 9, no. 6, 1945) to the case where heat exchange is present. (See also 59-14458)

Aerodynamics and Pneumatics

Kolscher, M.
DISCONTINUOUS SOLUTIONS OF THE EQUATIONS OF MOTION OF FLUID FLOW. [1959] 15p. 3 refs. R. T. P. Trans. no. 2403.
Order from SLA mi$2.40, ph$3.30 59-17839

Trans. of L[uft]f[ahrt]f[orschung] (Germany) 1940, v. 17, no. 5, p. 154-160.

Generalization of the existing analytical equations for an unsteady, two-dimensional potential flow leads to an equation giving a profile flow with finite wake region. Complete analysis of individual examples furnishes information on the conditions of development and affords proof that physically significant flow patterns can be obtained. (Author)

Multhopp, H.
THE CALCULATION OF THE LIFT DISTRIBUTION OF AEROFOILS. [1959] 40p. 12 refs. R. T. P. Trans. no. 2392.
Order from SLA mi$3.00, ph$6.30 59-17729

Trans. of L[uft]f[ahrt]f[orschung] (Germany) 1938, v. 15, no. 4, p. 153-169.

A description is given of a method for the calculation of the lift distribution of aerofoils with which reliable results have been obtained in various German experimental establishments and also in the aircraft industry. The amount of work otherwise necessary has been greatly reduced by the application of this method; the mathematical work is limited to the solution of a system of equations always capable of treatment by iteration; developments in series or harmonic analyses are unnecessary. The method can also be directly applied where the lift is no longer a linear function of the angle of incidence. The possibility is thus presented of applying the results of measurements mostly obtained under essentially simplified conditions on wings with flaps of all kinds, suction systems etc. to given complicated wings. (Author)

Peres.
THE ROLE OF RHEOLOGICAL ANALOGIES IN CERTAIN AERODYNAMICAL PROBLEMS. [1959] 2p. R. T. P. Trans. no. 2525.
Order from SLA mi$1.80, ph$1.80 59-17705

Trans. of unidentified French (?) mono.

Hydrodynamics, Hydraulics, and Hydrostatics

Dohrn, W. and Robra, H.
HYDRAULIC PRESS CONTROL. [1959].
Order from BISI £8 10s BISITS-1323

Trans. of Stahl u[nd] Eisen (West Germany) 1959 [v. 79] 16 Apr, p. 500-514.

Görtler, H.
ON AN OSCILLATION PHENOMENON IN FLUIDS WITH STABLE DENSITY STRATIFICATION (Über eine Schwingungserscheinung in Flüssigkeiten mit Stabiler Dichteschichtung). [1959] 10p. 14 refs. R. T. P. Trans. no. 2433.
Order from SLA mi$1.80, ph$1.80 59-17709

Trans. of Z[eitschrift für] A[ngewandte] M[athematik und] M[echanik] (Germany) 1943, v. 23, no. 2, p. 65-71.

The theory of forced small oscillations in a frictionless fluid with stable density stratification under gravity leads to the prediction of a novel oscillation phenomenon: for frequencies below a critical value which depends on the density stratification concerned, the differential equation of the second order for the displacement amplitudes of oscillations harmonic in time as functions of the place coordinates, is of the hyperbolic type. Defects in the regularity of these quantities at one position accordingly appear at the same time also at all points of the real characteristics of the differential equation passing through this position. This phenomenon can be observed in simple experiments, thereby confirming in detail the theoretical laws governing the run of the characteristics. (Author)

Al'tgauzen, O. N. [Zusman, Sh. I., and Stepanova, A. N.].
THERMOMAGNETIC TREATMENT OF MAGNETICALLY SOFT ALLOYS WITH A RECTANGULAR HYSTERESIS LOOP IN VACUUM FURNACES [Termomagnitnaya Obrabotka Magnitnomyagkikh Splavov s Pryamougol'noy Petley Gisterezisa v Vakuumnykh Pechakh]. [1959] 1000 words.
Order from HB $2.50 HB-4435

Trans. of Metallov[edeniye i Termicheskaya] Obra[botka] Met[allov] (USSR) 1958, no. 11, p. 60-62.

Heat treatment of certain ferromagnetic Fe-Ni and Fe-Ni-Co alloys, consisting in heating in vacuum and cooling in a magnetic field. Adaption of vertical vacuum furnace with Nichrome, etc. heating coils to the thermomagnetic treatment. Layout of magnetizing device and arrangement of specimens. Study of effect of conditions of thermomagnetic treatment on properties of alloys studied, 0.002-0.004 ingage. Effect of magnetic field intensity applied; optimum intensity. Influence of nature of applied field (d.c., pulsating, or 50 cps a.c.) with constant field amplitudes; Conclusions. (HB abstract)

Gebhardt, Erich.
ON THE STRUCTURE AND CHANGES OF VOLUME OF ZINC-COPPER-ALUMINUM ALLOYS. IV. THE CAUSES OF THE VOLUME CHANGES AND A METHOD FOR ACHIEVING CONSTANCY OF DIMENSION [Überden Aufbau und die Volumenanderungen der Zink-Kupfer-Aluminium-Legierungen. IV] [1959] 24p. (21 figs. 3 tables omitted).
Order from SLA mi$2.70, ph$4.80 59-17829

Trans. of [Zeitschrift für Metallkunde (West Germany) 1941, v. 33, no. 8/9, p. 297-305].

See also 59-17830

Gründer, W., Siemes, W., and Kauffmann, J. F.
MEASURING THE AERATION OF FLOTATION CELLS [Die Messung der Belüftung von Flotationszellen] [1959] [18]p. 6 refs.
Order from SLA mi$2.40, ph$3.30 59-17454

Trans. of [Zeitschrift für Erzbergbau und Metallhüttenwesen] (West Germany) 1956, v. 9 [no. 12] p. 559-563.

A method for determining the size of air bubbles in flotation cells was developed. Various cells were examined, both with pure water and with some flotation agents at different concentrations. The cell design has only a very slight influence on the size distribution of the air bubbles. Type and concentration of the flotation agent determine the bubble sizes to a large extent. With the same flotation agents and the same concentration of these agents in various cells, the number of bubbles present per unit cell volume thus depends solely on the supply of air. It is shown how, on the basis of the results obtained, the load of the individual bubbles may be estimated. (Author's summary)

Harr, R., Wagner, K., and Willmer, T.-H.
DUST REMOVAL AT THE BOCHUMER VEREIN LD STEELWORKS. [1959] 2600 words.
Order from HB $6.40 HB-4646

Trans. of Berg- und Hüttenm[ännische] Monatshefte (Austria) 1959, v. 104, no. 2, p. 50-55.

Equipment selected for gas cleaning at the new steelworks of Bochumer Verein, consisting of two 35-ton LD vessels and one 75-ton arc furnace where the outgoing waste gases were to be freed from visible color without contamination of water supplies. Cooling and cleaning. (HB abstract)

Kamenetskaya, D. S.
SOME THEORETICAL QUESTIONS ABOUT VACUUM METALLURGY. [1959] 2900 words.
Order from HB $4.80 HB-4364

Trans. of Russian mono. Primeneniye Vakuuma v Metallurgiy, Moscow, 1958, p. 49-53.

Outline of some questions associated with the behavior of substances in a vacuum and the resultant technological features of vacuum melting. Pressure to be maintained in relation to vapor pressure of metal or alloy being melted in a vacuum furnace. Degree of vacuum ensuring the expected amount of degassing, as a function of the vapor pressure of metal being melted. View-points governing the selection of the materials for crucibles, thermocouple sleeves, stoppers, etc. in vacuum metallurgy. Substances best suited as aids in the vacuum refining of metals. (HB abstract)

Kirvalidze, N. S. and Korobochkin, I. Ya.
SIMPLIFIED METHOD FOR TESTING THE PIERCING PROPERTIES OF METALS [Uproshchennyy Metod Ispytaniya Metalla na Proshivayemost'] [1959].
Order from BISI £2 15s BISITS-1425

Trans. of *Zavods[kaya] Lab[oratoriya] (USSR) 1958 [v. 24] no. 7, p. 850-854.

Koster, W[erner].
CONCERNING THE SYNTHESIS AND THE VOLUME CHANGES OF ZINC-COPPER-ALUMINUM ALLOYS. III. SURVEY OF THE COURSE OF EQUILIBRIUM IN THE COPPER-ALUMINUM-ZINC SYSTEM (Uber den Aufbau und die Volumenanderungen der Zink-Kupfer-Aluminum-Legierungen. III.). [1959] [26]p. (60 figs. omitted) 10 refs.
Order from SLA mi$2.70, ph$4.80 59-17830

Trans. of Zeitschrift für Metallkunde (West Germany) 1941, v. 33, no. 8/9, p. 289-296.

See also 59-17829

Portnoy, K. I., Samsonov, G. V., and Frolova, K. I.
ALLOYING OF METAL BORIDES WITH SILICON. [1959] 2000 words.
Order from HB $4.75 HB-4611

Trans. of Akad[emiya] Nauk SSSR. Otd[eleniye] Tekh[nicheskikh] Nauk. Izv[estiya]: Met[allurgiya] i Topl[ivo] 1959, no. 2, p. 117-121.

Study of effect of additions of silicides of metals having volatile oxides, or of elementary silicon, upon oxidation resistance of binary Ti-Cr borides with a TiB2/CrB2 ratio of 4/1. Explanation of dissimilar effects of elementary silicon as against silicides of Mo or W. Results of tests for resistance to atmospheric oxidation and to oxidation at 1000-1200°C. Micrographic analysis data. Usefulness of results. (HB abstract)

Ferrous Metals

Apayev, B. A.
THE MAGNETIC EFFECT IN THE RANGE 260° - 270° ON THERMOMAGNETIC CURVES FOR TEMPERED AND DEFORMED SAMPLES. [1959] 12p. (7 figs. omitted) 20 refs.
Order from LC or SLA mi$2.40, ph$3.30 59-18348

Trans. of *Fizika Metallov i Metallovedeniye (USSR) 1957, v. 4, no. 2, p. 267-277.

Increased magnetization (as compared with the magnetization in the annealed state) and the appearance of an inflection point on the thermomagnetic curves in the range 260° to 270°C (besides the inflection at the Curie point of cementite) were observed during tempering of quenched and deformation of annealed steel. These effects are due to the presence of χ Fe_xC carbide in tempered and deformed steel. The increase in magnetization is related to the chemical composition of this carbide ($x<3$), and the second inflection on the thermomagnetic curve to the magnetic conversion (Curie point) of this phase.

Bettzieche, P.
HEAT-RESISTING FERRITIC STEELS. [1959].
Order from BISI $\frac{f}{\chi}$ 3 5s BISITS-1420

Trans. of Vereinigung [der] Grosskesselbesitzer. Mitt[eilungen] (West Germany) 1958, no. 57, p. 393-397.

Brhaček, L. and others.
ELECTROLYTIC EXTRACTION OF NONMETALLIC INCLUSIONS FROM STEELS BY A MODIFIED KLINGER-KOCH METHOD. [1959] 1800 words.
Order from HB $4.80 HB-4495

Trans. of Hutnické Listy (Czechoslovakia) 1959, v. 14, no. 1, p. 54-55.

Description of a modified Klinger-Koch apparatus with vertical diaphragm and other improvements. Electrical connections for measuring the potential. Lack of general validity of originally recommended maximum permissible potential of 500 mv. Polarization curves with old and new cell resp: same quantity of residue can now be obtained in 1/3 of previous time. Suggested new procedure for plant laboratories; accuracy and reproducibility of results. Electrolysis battery. Diaphragms. (HB abstract)

Brotzmann, K. and others.
COMMERCIAL VACUUM TREATMENT OF STEEL FOR ROLLING AND FORGING INGOTS AND CASTINGS; A GENERAL DISCUSSION. [1959] 4000 words.
Order from HB $7.90 HB-4606

Trans. of Stahl und Eisen (West Germany) 1959, v. 79, no. 9, p. 634-638.

First experimental setup for vacuum-lift degassing, in Dortmund, Germany. Relative merits of vacuum-lifter (Dortmund-Horde) and recirculation (Ruhrstahl) processes. Arrangement for injection of additional gas in vacuum-lifter process. Supplementary data on recirculation process. Turbulent vs. laminar flow of metal in suction nozzle; determination of flowrates and steel throughputs (e.g., with Au-198). Experimental work on degassing of 40-ton heats in lable; degassing after filling the mold. Nitrogen content. Present status of degassing. (HB abstract)

Csepiga, Z.
DILATOMETRIC DETERMINATION OF RETAINED AUSTENITE. [1959].
Order from BISI ·4 5s BISITS-1338

Trans. of Koh[aszati] Lapok (Hungary) 1957, v. 12, Apr/May, p. 156-162.

Hohenemser, K. and Prager, W.
THE MECHANICS OF THE PLASTIC DEFORMATION OF MILD STEEL. [1959] 17p. 18 refs. R. T. P. Trans. no. 2468.
Order from SLA mi$2.40, ph$3.30 59-17712

Trans. of Z[eitschrift für] A[ngewandte] M[athematik und] M[echanik] (Germany) 1932, v. 12, no. 1, p. 1-14.

Knüppel, H., Wiethoff, G., and Juchhoff, W.
TESTING AS-ROLLED [STEEL] ROUNDS FOR CRACKS BY A MAGNETO-INDUCTIVE EDDY-CURRENT METHOD. [1959] 5800 words.
Order from HB $12.75 HB-4618

Trans. of Stahl und Eisen (West Germany) 1959, v. 79, no. 10, p. 711-718.

Fundamentals and description of a phase-sensitive eddy-current method. Indication of local changes in electrical conductivity, and of presence of cracks as distinguished from local changes in relative permeability and in diameter of stock to be tested. Effect of various testing conditions on the indications. Current

amplitude as affecting the possibility of uncovering cracks. Testing in series with two different current amplitudes. Information on location, size, and distribution of the detected cracks from results of a series of tests. Effect of temperature fluctuations at surface of rounds. (HB abstract)

Koch, W., Eckhard, S., and Stricker, F.
SPECTROCHEMICAL RAPID DETERMINATION OF GASES IN STEELS. [1959] 5200 words.
Order from HB $12.75 HB-4558

Trans. of Archiv[fur das] Eisenh[uttenwesen] (West Germany) 1959, v. 30, no. 3, p. 137-144.

Successful attempt at cutting the time needed for determination of carbon monoxide, nitrogen, and hydrogen extracted from metals to a total of 2 1/2-4 minutes for the three gases (20 seconds for a single gas analysis) and prospects of using this new rapid and highly sensitive method for furnace control tests. Spectrochemical gas analysis with high-frequency excitation. Dependence of intensities of lines and bands on pressure. Experimental apparatus: high-frequency generator; discharge tube spectrograph; dispersion equipment; radiation receiver; differential amplifier with recorder; general assembly of apparatus. Analysis lines recommended; measuring procedure. Calibration curves for carbon monoxide and nitrogen. Dependence of total emission on hydrogen content. Experimental results obtained; their evaluation; proportionality between maximum intensity and concentration of gas in mixture. Prospects. General Discussion. (HB abstract)

Krisch, A.
THE APPEARANCE OF FRACTURES OF TUBULAR TEST PIECES AFTER INTERNAL PRESSURE; TESTS AT TEMPERATURES TO -70°C. (WITH DISCUSSION). [1959].
Order from BISI 5 BISITS-1414

Trans. of Arch[iv für das] Eisenhüt[tenwesen] (West Germany) 1959, v. 30, June, p. 337-344.

Examination of plain low carbon steels in a normalised and artificially aged condition by means of internal pressure tests with superimposed longitudinal stresses at low temperatures to -70°C. Classification of test pieces according to the extent of the bulging and the length of the crack. Correlation between materials and the types of fracture and comparison of micro-structures. (Author's summary).

Morokuma, H., Miyasita, Y., and Hasunuma, H.
CONSTANTES OPTIQUES DE LA SURFACE D'UN ACIER, tr. by Minn. 19 Jan 59 [17]p. 7 refs. Trans. no. X 118 (text in French).
Order from SLA mi$2.40, ph$3.30 CEA-tr-X118

Trans. in French of [Oyo Butsuri] (Japan) 1957, v. 26, no. 10, p. 534-538.

Samples of steel were polished first by hand with emery: certain samples were then subjected to electrolytic polishing. Surface reflectivity of all samples was determined by means of a polarizing spectrometer.

Nazarova, T. N.
CONTACT FATIGUE OF MEDIUM-CARBON STEEL INDUCTION HARDENED, INSTEAD OF CARBURIZED [Kontaktnaya Ustalost' Sredneuglerodistoy Netsementovannoy Stali, Zakalennoy pri Nagreve T. V. Ch.]. [1959] 1300 words.
Order from HB $2.90 HB-4434

Trans. of Metalloved[eniye i Termicheskaya] Obra[botka] Met[allov] (USSR) 1958, no. 11, p. 57-59.

Study of possible merits of induction hardening over carburizing, for gear steels to serve under high contact pressures. Setup and procedure in measuring contact fatigue... Effect of case depth and core hardness, also preceding heat treatment ... How to elicit a maximum contact fatigue strength by suitable heat treatment. (HB abstract)

Pottgiesser, C. H., Daermann, H.-J., and Drevermann, A.
OPERATING EXPERIENCE IN THE VACUUM TREATMENT OF OPEN-HEARTH STEELS. [1959] 3400 words.
Order from HB $7.80 HB-4603

Trans. of Stahl und Eisen (West Germany) 1959, v. 79, no. 8, p. 463-468.

Use of vacuum-lifter installation at the plant; design of degassing setup. Progress of vacuum treatment with time. Heat losses in ladle; heating system to compensate for them. Difficulties encountered with refractory linings of vacuum vessel, especially suction nozzle, and how they were overcome. Bottom life of degassing tank. Capacity of degassing tank increased from 6 to 12 m. ton for improved degassing efficiency. Operating results: Hydrogen content in forgings; comparative oxygen contents of forgings of vacuum-treated and of untreated steel; residual oxides in unalloyed 40-m. ton ingots with and without vacuum treatment. Casting in controlled atmosphere; effect on oxygen contents of steel with less than 0.10% C. Inclusion content of heavy forging ingots across their section. Results of ultrasonic testing of ships' plates rolled from 21 m. ton slab ingots. (HB abstract)

Pottgiesser, C. H., Wicher, A., and Klein, E.
PROPERTIES OF VACUUM-TREATED STEELS. [1959] 2600 words.
Order from HB $5.60 HB-4604

Trans. of Stahl und Eisen (West Germany) 1959, v. 79, no. 8, p. 468-472.

Studies of steels treated by the vacuum-lifter process and aluminum killed, to obtain information on distribution of non-metallic inclusions and aluminum within the same heat and among a great many heats of O. H. steel. Transverse and longitudinal mechanical properties. Influence of grain size on properties of silicon-killed vacuum-degassed steels. Behavior of steels in cold upsetting and pressing; also in deep drawing. Data on machinability of vacuum-degassed steels. (HB abstract)

Shvaykovskaya, E. O.
DETERMINATION OF PERCENTAGE COMPOSITION OF IRON OXIDES IN MIXTURES OF NONMAGNETIC AND MAGNETIC O[R]ES. [1959] 600 words.
Order from HB $2.00 HB-4629

Trans. of Zavodskaya Laboratoriya (USSR) 1956, v. 22, no. 3, p. 316-317.

Development of an X-ray method for qualitative and quantitative determination of magnetic and nonmagnetic phases in iron-oxide mixtures. Procedure. Table giving interplanar spacings of lines of equal intensity for stepped magnetite + hematite mixtures. Error: ±10%.] (HB abstract)

Light Metals

Beresnev, B. I., Vereshchagin, L. F., and Riabinin, Yu. N.
ON THE EFFECT OF HYDROSTATIC PRESSURE ON THE CHANGE IN THE MECHANICAL PROPERTIES OF ALUMINUM AFTER LARGE PLASTIC DEFORMATIONS. [1959] 6p. 11 refs. B-141.
Order from MDF $3.00 MDF B-141

Trans. of *Fiz[ika] Met[allov] i Metall[ovedeniye] (USSR) 1959, v. 7, no. 1, p. 128-132.

The method of extruding stepped samples by a fluid under high pressure would permit establishment of the effect of the pressure on the residual change in the properties of aluminum. Its plasticity at higher extrusion pressures is increased. (Extended from the report)

Smirnov-Verin, S.
SECONDARY ALUMINUM ALLOYS IMPROVED THROUGH ADDITION OF CERIUM (Uluchsheniye Svoystv Vtorichnykh Aluminievykh Splavov Dobavkoy Tseriya). [1959] [4]p.
Order from LC or SLA mi$1.80, ph$1.80 59-17859

Trans. of Novosti Tekhniki (USSR) 1940, v. 9, no. 23, p. 20-21.

Nonferrous (except light) Metals

Pogodin, S. A., Shumova, L. S., and Kugucheva, F. A.
CONSTITUTION AND PROPERTIES OF COPPER-ZIRCONIUM ALLOYS (Constitution et Propriétés des Alliages Cuivre-Zirconium). [1959] [4]p. (4 figs. omitted) 13 refs.
Order from SLA mi$1.80, ph$1.80 59-17968

Trans. of [Akademiya Nauk SSSR. Doklady] 1940, v. 27, no. 7, p. 670-672.

Wagner, E.
TREMPE ET DEFORMATIONS DES ALLIAGES D'OR, tr. by Dobrowlski. 15 May 59 [10]p. (tables omitted) 12 refs. Trans. no. A 576 (text in French).
Order from SLA mi$1.80, ph$1.80 CEA-tr-A576

Trans. in French of Metall (West Germany) 1958 [v. 12] no. 7, p. 628-630.

Results of tests to determine the reciprocal effect of cold deformation and tempering on 14-carat gold and on a gold-platinum alloy suitable for jewelry indicate that the same laws are valid which have been observed for aluminum and copper alloys. Tempering is accelerated by hammer hardening. There is a lessening of hardness if the tempering is done before the hammer hardening.

Weber, J[oachim].
ÉTUDE D'UNE MACROSTRUCTURE DU SÉLÉNIUM AMORPHE, tr. by J. Brosse. 12 Mar 59 [8]p. Trans. no. A 272 (text in French).
Order from SLA mi$1.80, ph$1.80 CEA-tr-A272

Trans. in French of Z[eitschrift] f[ür] Natürforsch[ung] (West Germany) 1953, v. 8a, p. 565-567.

Structural Metallurgy and Corrosion

Aebi, F[ranz].
ÉTUDE DE LA CORROSION SOUS TENSION DU LAITON ALPHA EN VAPEUR D'AMMONIAC. III. MÉTHODE A L'AMMONIAC POUR L'ESSAI DE SENSIBILITÉ À LA FISSURATION SOUS TENSION DES OBJETS EN LAITON, tr. by B. Moreau. 25 Mar 59 [28]p. 29 refs. Trans. no. A 540 (text in French).
Order from SLA mi$2.70, ph$4.80 CEA-tr-A540

Trans. in French of Z[eitschrift für] Metall[kunde] (West Germany) 1958, v. 49, no. 2, p. 63-68.

Andreyev, I. L., Lukovkin, A. I. and others.
PROTECTION OF SHIP'S WATER-TUBE BOILERS AGAINST CORROSION, tr. by A. Pingell. Table of contents. 26 June 59 [3]p. N R L Trans. no. 740.
Order from OTS $0.50 59-21090

Trans. from mono. Zashchita Sudovykh Vodotrubyykh Kotlov ot Korrozii, Leningrad, 1958, table of contents.

Besnard, S. and Talbot, J.
THE INFLUENCE OF THE PURITY AND OF THE STRUCTURAL STATE OF IRON ON ITS CAPACITY FOR BEING CHARGED WITH CATHODIC HYDROGEN. (WITH DISCUSSION). [1959].
Order from BISI £5 BISITS-1380

Trans. of Rev[ue de] Met[allurgie] (France) 1959 [v. 56] Feb, p. 163-170.

The charging of iron with cathodic hydrogen. The influence of the metal structure on its capacity for being charged. The influence of the purity of the metal on its capacity for being charged. Apparatus for the determination of hydrogen in very small quantities. Micrographic study of iron samples charged with hydrogen. Study of the mechanical properties of iron charged with hydrogen. Influence of the addition of sodium sulphide to the charging bath. Micrographic study of iron charged with hydrogen in the presence of sodium sulphide. The mechanical properties of iron charged with hydrogen in the presence of sodium sulphide. Study of the penetration of sulphur into iron by means of radioactive tracers. (List of contents). (Author's summary)

Bokshteyn, S. Z., Kishkin, S. T. and others.
STUDY OF DIFFUSION IN THE INTERIOR AND ALONG THE BOUNDARIES OF METAL GRAINS BY THE METHOD OF AUTORADIOGRAPHY, tr. by V. Beak. 1955 [7]p. 8 refs. A. E. R. E. Lib/Trans. 627.
Order from SLA mi$1. 80, ph$1. 80 59-17543

Trans. of Akademiya Nauk SSSR. Doklady, 1955, v. 102, no. 1, p. 73-75.

A specimen of the alloy to be investigated was coated with the radioactive substance whose diffusion was to be studied. After diffusional annealing at the appropriate temperature, an oblique section was prepared from the side of the active surface. By making a contact print from the plane of the section and then "photometering" (fotometrinuyn) it along the plane, it was possible to determine the dependence of density of darkening upon the depth of penetration of the radioactive substance. The character of the mutual action in solid solutions of tin in iron on the one hand, and of tin in nickel on the other, was different. In the second case, even in the initial stage of the process, the atoms of tin move predominantly along the boundaries; whereas in the first case the bulk of the tin atoms move frontally into the interior of the grain. This difference is possibly explained by a difference in the surface-active properties of these elements. At all events, the difference in surface tension of nickel and tin at temperatures close to the melting point, is greater than for iron and tin (respectively 1350; 1100; 525 dynes/cm). This explanation is, however, inadequate; the difference in lattice structure at the boundary and in the interior is also important. It is scarcely possible to explain the different character of diffusion by a difference in mutual solubility, and furthermore, the solubility of tin in nickel is somewhat higher than in iron. (Extracted from the report)

Class, I.
STRESS CORROSION PHENOMENA IN MECHANICALLY STRAINED STEEL DUE TO DIFFUSING HYDROGEN, tr. by R. J. Richardson. 1955 [22]p. 15 refs. A. E. R. E. Lib/Trans. 568.
Order from SLA mi$2. 70, ph$4. 80 59-17504

Trans. of Werkstoffe und Korrosion (West Germany) 1955, v. 6, no. 5, p. 237-245.

Address made to the Corrosion Session of the Dochema Annual Conference 1954, Frankfurt-am-Main.

Engell, H[ans]-J[ürgen].
CONSIDÉRATIONS ÉLECTROCHIMIQUES SUR LES RÉACTIFS MÉTALLOGRAPHIQUES, tr. by Kozlik and Courtot. 29 Jan 59 [16]p. 2 refs. Trans. no. A 516 (text in French).
Order from SLA mi$2. 40, ph$3. 30 CEA-tr-A516

Trans. in French of Arch[iv für das] Eisenhüttenw[esen] (West Germany) 1958, v. 29, no. 1, p. 73-76.

Ergang, R., Gunther, G., and Weik, H.
THE PRESENT STATE OF KNOWLEDGE CONCERNING THE SIGMA PHASE IN IRON-NICKEL-CHROMIUM ALLOYS. [1959] 60 refs.
Order from BISI £5 5s BISITS-1410

Trans. of Stahl u[nd] Eisen (West Germany) 1959 [v. 79] 8 Jan, p. 46-51.

Geguzin, Ya. Ye.
ON THE FORM OF PORES ARISING IN THE MUTUAL DIFFUSION OF METALS, tr. by J. B. Sykes. 1956 [7]p. 5 refs. A. E. R. E. Lib/Trans. 615.
Order from SLA mi$1. 80, ph$1. 80 59-17531

Trans. of Akademiya Nauk SSSR. Doklady, 1955, v. 100, no. 2, p. 255-257.

The main series of experiments was carried out on specimens of the system α-brass-copper (the α-brass contained 30% of zinc). Specimens consisting of three layers (copper, brass, copper) were polished on all contact surfaces and compressed. The compressed specimen was placed in a screw clamp and subjected to preliminary annealing ($T = 750^{o}$, $t = 2$ hours) to ensure reliable contacts. The main diffusion annealing was carried out in a current of hydrogen with $T = 850^{o}$ and $t \leq 10$ hours. To avoid evaporation of zinc from the lateral surface of the specimen, it was galvanically covered with copper. Cross-sections of the specimens perpendicular to the plane of the contact surfaces were investigated. The sections were carefully polished on a felt washer and were etched with ammonia and hydrogen peroxide (1:1). By observing the sections, the following results could be obtained: (a) the pores formed in the brass have a boundary which is not spherical; (b) in the plane of the section one finds cross-sections of pores which are triangular, rectangular, pentagonal and hexagonal in shape; (c) inside a given grain in the section plane, the cross-sections of pores are almost all of the same shape and orientation. The data described give reason to suppose that the pores formed in α-brass by the diffusion of zinc into copper are cubical in shape. The fact that the shape of the cross-sections of pores inside one grain is almost constant, but varies from grain to grain, is explained by the different orientations of the individual grains relative to the plane of the section. (Extracted from the report)

Hebberling, H.
PASSIVATION PAR APPLICATION D'UNE COUCHE DE PEINTURE, tr. by B. Moreau. 15 May 59 [5]p. 2 refs. Trans. no. A 362 (text in French).
Order from SLA mi$1. 80, ph$1. 80 CEA-tr-A362

Trans. in French of Metalloberfläche (West Germany) 1957 [v. 11] no. 3, p. 97.

Phosphoric acid passivating reagents are rejected on the ground that their oxygen content is stable and cannot readily form an oxide layer on the surface of the metal. "V 40" red lead, which contains 40 parts of finely ground barium sulfate to 100 parts of the finished commercial product, affords adequate protection against corrosion to steel machine parts not directly subjected to mechanical stress. This product is more readily available than pure red lead, and it is more economical.

Kohn, A.
THE POSSIBILITIES OF QUANTITATIVE AUTORADIOGRAPHY BY MEANS OF MICROPHOTOMETRIC MEASUREMENTS. [1959].
Order from BISI £5 10s BISITS-1352

Trans. of Rev[ue de] Met[allurgie] (France) 1954, v. 51, no. 7, p. 503-513.

Kurganov, G. V. and Sutina, Yu. A.
FAILURE OF HIGH-TEMPERATURE [Ni-BASE] ALLOYS UNDER THERMAL AND STRESS CYCLING [Razrusheniye Zharoprochnykh Splavov pri Tsiklicheskikh Izmeneniyakh Temperatury i Napryazheniya]. [1959] 1900 words.
Order from HB $4.40 HB-4391

Trans. of Metallovedeniye i [Termicheskaya] Obra[botka] Metallov (USSR) 1958, no. 10, p. 23-27.

Study of effect of simultaneous thermal cycling and periodic stressing (50 mins. under load and 10 mins. unloaded) on strength and creep of various nickel-base alloys. Compositions and heat treatment mechanical properties. Testing setup shape and dimensions of creep and rupture test bars. Damage curves for static and periodic stressing; principal factors promoting development of cracks at high temperatures. Creep rate during periodic vs. continuous stressing. Cause of more rapid strength loss under periodic stressing; effect of lead additions on rupture strength at 850°C. (HB abstract)

Lomonosova, L. S.
SPECTROANALYSIS OF TITANIUM AND COLUMBIUM IN TANTALUM METAL POWDER. [1959] 1000 words.
Order from HB $2.80 HB-4650

Trans. of Akad[emiya] Nauk SSSR. Izv[estiya]. Ser[iya] Fiz[icheskaya] 1950, v. 14, no. 5, p. 692-695.

Preparation of standards; difficulties involved. Analysis procedure- line pairs; sample weight, etc. Calibration curve for Ti; underlying analysis conditions. Reproducibility of results. Calibration curve for Cb. Time required. (HB abstract)

Lücke, Kurt.
NATURE ET PROPRIÉTÉS DES JOINTS DE GRAINS DANS LES MÉTAUX POLYCRISTALLINS, tr. by Klersy. 26 Feb 59 [65]p. 77 refs. Trans. no. A 221 (text in French).
Order from SLA mi$3.90, ph$10.80 CEA-tr-A221

Trans. in French of [Zeitschrift für] Metallkunde (West Germany) 1953, v. 44 [no. 8/9] p. 370-378 and 418-426.

Schucking, G[ünter].
PROTECTION CONTRE LA CORROSION ET MATERIAUX UTILISABLES DANS LES CONSTRUCTIONS MODERNES POUR ACIDES, tr. by Brosse. 5 Feb 59 [46]p. 82 refs. Trans. no. A 261 (test in French).
Order from SLA mi$3.30, ph$7.80 CEA-tr-A261

Trans. in French of Werkstof[fe und] Korr[osion] (West Germany) 1956, v. 7, no. 11, p. 615-626.

In this survey of protective materials suitable for use in such installations as scrubbers, a brief historical sketch precedes a discussion of recently developed chlorobutadiene or polyurethane products, various cements and lacquers.

NUCLEAR PHYSICS AND NUCLEAR CHEMISTRY

Alberts, Fritz.
NON-CONTACT CONTINUOUS MEASUREMENT OF THICKNESS AND WEIGHT BY MEANS OF RADIATION FROM RADIOACTIVE MATERIALS. [1959] 17p. 10 refs.
Order from SLA mi$2.40, ph$3.30 59-17558

Trans. of Kautschuk u[nd] Gummi (Germany) [1954] v. 7 [no. 7] p. 157-162 W T.

Ignatenko, A. Ye., Mukhin, A. I. and others.
THE INTERACTION OF NEGATIVE π MESONS WITH NUCLEI OF BERYLLIUM, CARBON AND OXYGEN IN THE ENERGY RANGE FROM 140 TO 400 MEV. tr. by J. B. Sykes. 1955 [6]p. 8 refs. A. E. R. E. Lib/Trans. 637.
Order from SLA mi$1.80, ph$1.80 59-17550

Trans. of Akademiya Nauk SSSR. Doklady, 1955, v. 103, no. 3, p. 395-397.

Total reaction cross sections were determined by measuring the attenuation of a beam of negative π mesons under conditions of good geometry. (A description of the experimental conditions and of the apparatus used to record the mesons is given in 59-17536.)

Ignatenko, A. Ye., Mukhin, A. I. and others.
TOTAL INTERACTION CROSS-SECTIONS OF NEGATIVE π MESONS WITH HYDROGEN IN THE ENERGY RANGE FROM 140 TO 400 MeV, tr. by J. B. Sykes. 1955 [7]p. (1 table omitted) 5 refs. A. E. R. E. Lib/Trans. 620.
Order from SLA mi$1.80, ph$1.80 59-17536

Trans. of Akademiya Nauk SSSR. Doklady, 1955, v. 103, no. 1, p. 45-47.

Accurate measurements of total cross sections of interactions of negative π mesons with hydrogen at 140 to 400 Mev were made using well collimated monoenergetic meson beams. The cross sections were determined by measuring the attenuation of the meson beams passing through paraffin, polyethylene, and graphite. Measurements were made with a system of 4 scintillation counters arranged along the axis of the meson beam. Results showed that the total cross section $\sigma_t(\pi^-, p)$ as a function of energy has a maximum (as previously reported by J. Ashkin et al., Phys. Rev. 93: 1129, 1954) at about 190 Mev. It decreases rapidly at higher energies up to about 300 Mev, after which it remains constant at 26×10^{-27} sq cm. If there is a resonnance it lies close to 200 Mev and the contributions of other states to the cross section is very small. (See also 59-17550)

Podgurskaya, A. V., Kalashnikova, V. I., and others.
ON SPONTANEOUS FISSION OF THORIUM, tr. by V. Beak. Aug 55 [8]p. 7 refs. A. E. R. E. Lib/Trans. 569.
Order from SLA mi$1.80, ph$1.80 59-17505

Trans. of *Zhurnal Eksperimentalnoy i Teoreticheskoy Fiziki (USSR) 1955, v. 28, no. 4, p. 503-505.

Experiments with a large ionization chamber directly recording the fission fragments indicate that the probability of spontaneous fission of thorium is very small and the life period longer than 10^{20} years.

Reut, A. A., Korenchenko, S. M., and others.
AN ATTEMPT TO DISCOVER NUCLEI OF H^4 AMONG THE PRODUCTS OF SPALLATION OF CARBON BY PROTONS OF ENERGY 300 MeV, tr. by J. B. Sykes. 1955 [6]p. 11 refs. A. E. R. E. Lib/Trans. 600.
Order from SLA mi$1.80, ph$1.80 59-17533

Trans. of Akademiya Nauk SSSR. Doklady, 1955, v. 102, no. 4, p. 723-725.

The process sought was $H^4 \rightarrow He^4 + \beta^- + \gamma$. When 300-Mev protons interacted with carbon nuclei, the cross sections for the formation of β^- active ($E\beta > 12$ Mev) radioelements with decay half lives of 2 to 4 msec and 4 to 10 msec were respectively less than 10^{-30} and 10^{-29} sq cm. (These experiments were performed during 1951 and 1952, and the results have been previously described in the Reports of the Institute of Nuclear Problems of the USSR Academy of Sciences.)

Elementary Particles

Askar'yan, G. A.
A GAS BUBBLE CHAMBER: A POSSIBLE RECORDER OF THE ELEMENTARY PROCESS OF INTERACTION OF IONISING RADIATION WITH MATTER, tr. by J. B. Sykes. 1955 [4]p. 2 refs. A. E. R. E. Lib/Trans. 589.
Order from SLA mi$1.80, ph$1.80 59-17490

Trans. of *Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki (USSR) 1955, v. 28, no. 5, p. 636.

This paper is the author's abstract of a report made at the Institute of Chemical Physics of the U. S. S. R. Academy of Sciences in 1953.

Askar yan, G. A.
PROSPECTS FOR THE USE OF IMPULSE MULTIGRID ELECTRON-OPTIC TUBES TO RECORD TRACKS OF IONISING PARTICLES IN LUMINESCENT MEDIA, tr. by J. B. Sykes. 1955 [6]p. 3 refs. A. E. R. E. Lib/Trans. 588.
Order from SLA mi$1.80, ph$1.80 59-17489

Trans. of *Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki (USSR) 1955, v. 28, no. 5, p. 626-627.

(This paper is the author's abstract of a diploma thesis defended by the author in 1951 in the Physics Faculty of Moscow State University.)

Ivanova, N. S., Perfilov, N. A., and Shamov, V. P.
THE FISSION OF URANIUM NUCLEI BY PROTONS OF ENERGY 460 MeV, tr. by J. B. Sykes. 1956 [7]p. 1 ref. A. E. R. E. Lib/Trans. 646.
Order from SLA mi$1.80, ph$1.80 59-17556

Trans. of Akademiya Nauk SSSR. Doklady, 1955, v. 103, no. 4, p. 573-575.

High sensitivity photographic plates with uranium introduced were irradiated by 460-Mev protons, developed by the deep temperature method, and examined under a microscope. The emulsions used were the electron-sensitive Ilford G5 and the NIKFI with a sensitivity limit of 80 to 90 Mev for protons. All but 8 of the 46 fissions of uranium nuclei observed in the Ilford G5 emulsion were accompanied by the emission of light charged particles (in one case 6 particles were simultaneously emitted). About 40% of all the particles emitted had energies greater than 80 to 90 Mev. The number of light charged particles emitted forward (the forward hemisphere) was 3.3 times greater than the number emitted backward: for energies greater than 30 Mev this ratio was 4.8. A comparison of the energy spectrum of the light charged particles with their angular distribution indicated that most of the particles are formed from a cascade process in the uranium nucleus. The mean excitation energy acquired by the uranium nucleus after the emission of the nuclear cascade particles was estimated as lying between 128 and 198 Mev. The fission cross section was $(1.2 \pm 0.3) \times 10^{-24}$ sq cm, and the probability of fission when uranium nuclei interact

with 460-Mev protons was estimated to be about 70 ± 18%. The range distribution of the individual fragments showed that many of the fissions were symmetrical. The mean total range of the fragments was 23.3μ, which shows that the mean kinetic energy of the fission fragments is obtained only from the Coulomb repulsion of these fragments. (The work indicated above was done early in 1953.)

Khalatnikov [I. M.] and Zharkov [V. N.]
THE SCATTERING OF NEUTRONS WITH AN ENERGY OF SEVERAL DEGREES IN LIQUID HELIUM II. [1959] [6]p. (includes erata) 3 refs. A. E. R. E. Lib/Trans. 515.
Order from SLA mi$1.80, ph$1.80 59-17339

Trans. of Akad[emiya] Nauk SSSR. Dokl[ady] 1953, v. 93, no. 5, p. 799-802.

The energy of the neutron scattering by rotons and phonons was used to derive equations for the number of rotons and phonons present in a unit volume of He II. The ranges of neutrons with energy $\Theta = 2^{o}K$ and different temperatures of HeII are tabulated.

Levintov, I. I.
POLARISATION OF VERY FAST NEUTRONS ON SCATTERING AT HEAVY NUCLEI, tr. by J. B. Sykes. 1955 [8]p. 8 refs. A. E. R. E. Lib/Trans. 578.
Order from SLA mi$1.80, ph$1.80 59-17438

Trans. of Akademiya Nauk SSSR. Doklady, 1954, v. 98, no. 3, p. 373-376.

Calculations showed that the polarization effects in the quasi-classical approximation do not vanish for a purely real potential ($\eta_l = 1$, $k = 0$) and that the polarization can change sign for various 0. Consequently the result given by Fermi (Nuovo cimento 11: 407, 1954) depends on the nature of the Born approximation. A tabularion is given of the values of P(0) in percent for scattering of neutrons at lead with $E_n \sim 300$ Mev, $R_{pb} = 9 \times 10^{-13}$ cm, $K = 0.02 \times 10^{-12}$ and 3×10^{-12} cm^{-1} and $N = 0.24$. This value of N was obtained for $a = 4 \times 10^{-27}$ sq cm and $\Delta R = 10^{-13}$cm.

Pontekorvo, B. M. and Selivanov, G. I.
FORMATION OF π^{o} MESONS AT HYDROGEN AND DEUTERIUM BY NEUTRONS OF ENERGY 400 MeV, tr. by J. B. Sykes. 1955 [6]p. 12 refs. A. E. R. E. Lib/Trans. 599.
Order from SLA mi$1.80, ph$1.80 59-17459

Trans. of Akademiya Nauk SSSR. Doklady, 1955, v. 102, no. 3, p. 495-497.

This communication is based on the results of work done in 1951 and 1952, and previously described in the Reports of the Institute of Nuclear Problems of the U. S. S. R. Academy of Sciences. Communications which have appeared in the Literature since these Reports were written are disregarded. (See also 59-17443)

Pontekorvo, B. M. and Selivanov, G. I
THE FORMATION OF π^{o} MESONS BY NEUTRONS, tr. by J. B. Sykes. Aug. 55 [9]p. 12 refs. A. E. R. E. Lib/Trans. 583.
Order from SLA mi$1.80, ph$1.80 59-17443

Trans. of Akademiya Nauk SSSR. Doklady, 1955, v. 102, no. 2, p. 253-256.

This communication is based on the results of work carried out in 1951 and the first quarter of 1952, and previously described in the Reports of the Institute of Nuclear Problems of the U. S. S. R. Academy of Sciences. Communications which have appeared in the literature since these reports were written are disregarded. (See also 59-17459)

Tyapkin, A. A., Kozodayev, M. S., and Prokoshkin, Yu. D.
FORMATION OF π^{o}-MESONS BY PROTONS WITH AN ENERGY OF 670 MeV AT THE NUCLEI OF VARIOUS ELEMENTS, tr. by J. B. Sykes. 1955 [7]p. 5 refs. A. E. R. E. Lib/Trans. 553.
Order from SLA mi$1.80, ph$1.80 59-17462

Trans. of Akademiya Nauk SSSR. Doklady, 1955, v. 100, no. 4, p. 689-692.
Another translation is available from CCT $5.00 as CCT-1254TT [1959] 3p.

Cross sections were measured at 670 Mev for the production of π^{o} mesons in simple (p, p) collision events and in proton collisions on the nuclei of D, Li, Be, B, C, Al, Cu, Cd, Sn, and Pb. The cross sections were determined at 0^{o} and 180^{o} from the direction of the proton beam by measuring the γ-photon flux which was produced in the neutral pion decay. The γ-photons were generated in an internal accelerator target and detected in a counter telescope. The mean γ-photon energies were 125±5 and 80±5 Mev at 0^{o} and 180^{o}, respectively. Dependence of γ-photon yields on the atomic weight of the element agreed staisfactorily with an $A^{2/3}$ law at 180^{o}, but at 0^{o} the γ-photon was suppressed for heavy elements. When only the "hard" γ-photon was recorded, no essential difference was found in the spectra of light and heavy elements. The cross section for the production of γ-photons at 0^{o} in hydrogen as compared to the same cross section in carbon was 0.18±0.01. The value of the relative cross section at 180^{o} was 0.093 0.008. The ratio of γ-photon yields at 0^{o} and 180^{o} for carbon ($\eta_C = 5.8 \pm 0.1$) indicates that η is smaller in light nuclei than in collisions of free protons. The differential cross section for γ-photon production at 0^{o} (or 180^{o}) in the c m system in (p, p) collisions was $(d\sigma^{\gamma}_{pp}/d\omega)_{0^{o}} = (0.59 \pm 0.13) \times 10^{-27}$ cm^2/steradian. The π^{o}-meson production cross section in the 480- to 670-Mev interval is concluded to vary as $p^{4.5 \pm 0.5}$, where p is the momentum of the neutral pion in the center-of-mass system.

Vavilov, Yu. N., Nikol'skiy, S. I., and Sarantsev, V. P.
THE SPATIAL DISTRIBUTION OF NUCLEAR-ACTIVE PARTICLES IN WIDE ATMOSPHERIC SHOWERS OF COSMIC RAYS, tr. by V. Beak. 1955 [6]p. 1 ref. A. E. R. E. Lib/Trans. 580.
Order from SLA mi$1.80, ph$1.80 59-17440

Trans. of *Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki (USSR) 1955, v. 28, no. 4, p. 505-506.

Measurements are reported, which were made in the autumn of 1952, of the spatial distribution of the flux of nuclear-active particles in wide atmospheric showers at an altitude of 3860 m. An apparatus was used with a large number of hodoscopic counters. The flux of nuclear-active particles was determined from the number of electron-nuclear showers caused in lead by the penetrating shower particles or the passage of a wide atmospheric shower. The apparatus for observing the electron-nuclear showers consisted of three groups of hodoscopic counters, each separated by 6-cm interlayers of lead. The presence of an upper layer of lead 20 cm in thickness enabled us to effect reliable separation of the penetrating particles from the electron-photon component of the shower. The thicknesses of the lead layers at bottom and sides were respectively 6 and 14 cm. The formation of an electron-nuclear shower in lead was characterized by the occurrence of a discharge in two or more counters situated in one row. The greater concentration of nuclear-active particles in the vicinity of the axis of the shower, compared with the distribution of all charged particles, agrees with the hypothesis of an equilibrium of the electron-photon component with the nuclear-active shower particles. The protion of nuclear-active particles in the whole shower was estimated as 0.3 to 0.5% of the total number of charged particles in the shower.

Nuclear Engineering and Power

Sushkov, Yu. N.
ATOMIC ENERGY IN AVIATION, tr. by Jan Woroncow. [1959] [27]p. 8 refs.
Order from OTS $0.75 59-11921

Trans. of Atomnaya Energiya v Aviatsii, Moscow, 1958.

Basic principles of nuclear-powered aircraft design are described in laymen's terms. A 100- to 200-hr operation life of an aircraft reactor would compare favorably with a similar life for contemporary long-range engines. Flight speeds of 2000 km/hr for 400,000 km could be attained. The heating of the air by means of the heat-exchange principle is the major deficiency of atomic engines. It could be eliminated by mixing the air with gaseous, liquid, or powdered nuclear fuel which in the neutron flux in the reactor core would undergo fission and liberate heat in the entire volume of air. "Shadow" shields for the crew compartment could be thin steel shells. Minimum flying weight would be 90-100 tons with a payload of 5-10 tons. Experimental prototypes can be anticipated in the near future.

Vladimirskiy, V. V. and Tarasov, Ye. K.
ON THE POSSIBILITY OF DISPENSING WITH A CRITICAL ENERGY IN ACCELERATOR WITH STRONG FOCUSSING, tr. by J. B. Sykes. Oct 55 [10]p. 5 refs. A. E. R. E. Lib/Trans. 624.
Order from SLA mi$1.80, ph$1.80 59-17540

Trans. of mono. Some Problems in the Theory of Cyclical Accelerators, Moscow, 1955, p. 13-22.

A method is proposed for eliminating the critical energy by means of a resonance change in the configuration of the magnetic field. Magnets with fields of reversed sign (compensating magnets) are placed along the orbit with a period close to that of the betatron oscillations. When the momentum of the particles deviates from the equilibrium value, forced oscillations occur which compensate the ordinary change in the length of the orbit for particles with non-equilibrium value, forced oscillations occur which compensate the ordinary change in the length of the orbit for particles with non-equilibrium momentum. The critical energy thereby becomes infinite. The length of the equilibrium orbit is increased by 15 or 20%. The treatment of the problem is mathematical.

PERSONNEL SUPPLIES AND PERSONAL EQUIPMENT

Frei-Strasser, Eduard.
SHIRT COLLAR POINT SUPPORT, tr. by FHB. 15 Apr 59, 2p.
Order from LC or SLA mi$1.80, ph$1.80 59-16193

Trans. of Swiss patent 300,321, Class 25 a; patented from 31 July 54, applied for 1 Mar 52, pub. 1 Oct 54.

The invention relates to a shirt collar point support of elastic material, shaped as a triangle with rounded corners, in whose center a further triangle is punched out whose sides run parallel to the outer edges of the support. This shape makes it possible that the collar resiliently yields when the person who wears it moves, and subsequently returns automatically to its original position and thus fits properly. It is superior to the non-punched-out shirt collar point support by its improved flexibility and to the conventional stick-shaped support by its stability. (Extracted from the report) (See also 59-16193)

Lombardo, Giuseppe.
METHOD OF FASTENING BADGES, SUCH AS INSIGNIA INDICATING RANK OR SERVICE UNIT, PARTICULARLY ON MILITARY UNIFORMS, tr. by FHB. 16 Apr 59, 5p. (3 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-16188

Trans. of Italian patent 512,162, Class XX; patented from 29 Jan 55, applied for 30 Dec 53, pub. July 56.

The method is characterized in that there is previously fastened, on the edge of the suit, in a stable manner (for instance by sewing) a badge base in relatively elastic plastic material, and then the badge is fastened on the aforementioned badge base by means of an adhesive previously spread on the badge base and activated by means of an activator, at the moment of fastening.

Taravella, Franz.
TURN-DOWN COLLAR WITH STIFFENED COLLAR POINTS, PARTICULARLY FOR SHIRTS, tr. by FHB. 16 Apr 59, 4p. (4 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-16194

Trans. of Swiss patent 306,614, Class 25 a; patented from 30 Apr 55, applied for 2 Dec 52, pub. 1 July 55.

The investion is characterized in that a stiffening leaf, cut corresponding to the collar point form, consisting of thermoplastic material (e.g., polyethylene) and rounded off on the outside edges, is sewed into each collar point.

PHYSICS

Kirko, M., Tutin, A. and others.
APPLIED MAGNETO-HYDRODYNAMICS (Prikladnaya Magnitogidrodinamika) tr. by Benjamin Skolnikoff. Apr 59, 124p. 83 refs.
Order from OTS $2.75 AEC-tr-3602

Trans. of Akademiya Nauk Latviyskoy SSR, Riga. Institut Fiziki. Trudy, 1956, v. 8.

Contents:
About the modeling of magneto-hydrodynamic phenomena in liquid metals, by I. M. Kirko
Electromagnetic pumps for liquid metals: a brief review based on published material, by I. A. Tutin and E. K. Yankop
Introduction to the theory of induction pumps, by I. A. Tutin
Velocity distribution and magneto-hydraulic pressure losses in a rectangular duct, by Yu. A. Birzvalk and I. A. Tutin
Electromagnetic phenomena in induction pumps for liquid metal, by I. A. Tutin and E. K. Yankop
[Contribution] to the problem of edge effects in linear induction pumps, by L. Ya. Ul'manis
Method of design of induction pumps for liquid metal, by Ya. Ya. Lielpeter and I. A. Tutin
Single-phase pumps: ac Faraday type, by E. K. Yankop
The problem of a conducting sphere in a traveling magnetic field, by Yu. K. Krumin

Meinke, H.
THE BEHAVIOR OF ELECTROMAGNETIC WAVES IN GREATLY INHOMOGENEOUS LINE CONSTRUCTION ELEMENTS (Das Verhalten Elektromagnetischer Wellen in Stark Inhomogenen Leitungsbauelementen). [1958] 21p. 8 refs. F-TS-9510/V.
Order from LC or SLA mi$2.70, ph$4.80 59-12157

Trans. of Zeitschrift für Angewandte Physik (West Germany) 1950, v. 2, no. 12, p. 473-478.

The intrinsic characteristic of wave fields in an inhomogeneity are the changes in the line of force diagram in the zone in which the electric transverse (magnetic) field strength reaches zero at the respective moment. Wedge shaped indentations are formed there in the transverse electric lines of power due to the effect of the electric series components. These wedges are calculated completely for the simple case of a field with constant curvature and demonstrated by several examples for the case of an arbitrarily formed inhomogeneity. (Author's summary)

Schumann, W. O.
PLASMA PHENOMENA ASSOCIATED WITH SUDDEN PULSES. [1959] [13]p. 2 refs. A. C. S. I. L. Trans. no. 1048.
Order from SLA mi$2.40, ph$3.30 59-17466

Trans. of Annalen der Physik (East Germany) 1943, [ser. 5] v. 43, no. 5, p. 369-382.

Acoustics

Hiedemann, E[gon].
PHYSICAL-CHEMICAL EFFECTS OF SUPER-SONIC WAVES, tr. by M. Flint. [1959] 17p. 52 refs. R. T. P. Trans. no. 2499.
Order from SLA mi$2.40, ph$3.30 59-17669

Trans. of Archiv f[ür] d[as] Eisenhüttenwesen (Germany) 1938, v. 12, no. 4, p. 185-193.

Sokoloff, S. J.
PRACTICAL APPLICATIONS OF THE DIFFRACTION OF LIGHT ON SUPERSONIC WAVES. [1959] 4p. 4 refs. R. T. P. Trans. no. 2453.
Order from SLA mi$1.80, ph$1.80 59-17681

Trans. of Physikalische Zeitschrift (Germany) 1935, v. 36 [no. 4] p. 142-144.

Electricity and Magnetism

Bricout, Pierre.
MATHEMATICAL REPRESENTATION OF HYSTERESIS CYCLES (Représentation Mathématique des Cycles d'Hystérésis). [1959] [20]p. (8 figs. omitted) 12 refs.
Order from SLA mi$2.40, ph$3.30 59-17948

Trans. of Revue Générale de l'Electricité (France) 1945, v. 54, no. 6, p. 183-191.

A general method is explained of directly obtaining a mathematical relation between the magnetic field and induction. A curve is drawn, with the inductions as abscissae, and the logarithms of the angles of the tangents of cycles as ordinates. The form of this curve permits the type of the representative function to be selected which, in the general case, contains a hyperbolic term, an exponential term, and an additional constant; very simple formulas furnish the coefficients. The investigation of the mean errors and the quadratic of the represention, carried out on many examples, show that they are not greater than errors of experimental measurements.

Drabkina, S. I.
THE THEORY OF THE DEVELOPMENT OF THE CHANNEL IN THE SPARK DISCHARGE, tr. by J. B. Sykes. 1955 [15]p. 6 refs. A. E. R. E. Lib/Trans 621.
Order from SLA mi$2.40, ph$3.30 59-17537

Trans. of Zhurnal Eksperimentalnoy i Teoreticheskoy Fiziki (USSR) 1951, v. 21, no. 4, p. 473-483.

The theory of the development of the channel of the spark discharge is developed on the basis of hydrodynamical shock processes. The nature of the "envelope" of the channel is established, and its expansion in the discharge process is calculated. (Author)

Lifshitz, I. M. and Kosevich, A. M.
ON THE THEORY OF THE DE HAAS-VAN ALPHEN EFFECT FOR PARTICLES WITH AN ARBITRARY DISPERSION LAW. [1959] 7p. 17 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-17677

Trans. of *[Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki (USSR) 1955, v. 29, no. 6, p. 743-747]

At attempt is made to determine the extent to which quantum theory can be used to explain the periodical dependence of magnetic susceptibility on the magnetic field at low temperatures.

Meinke, Hans Heinrich
APPLICATION OF CONFORMAL REPRESENTATIONS TO WAVE FIELDS [AND] A GENERAL SOLUTION METHOD FOR INHOMOGENEOUS CYLINDRICALLY-SYMMETRICAL WAVE FIELDS. [1958] 52p. 30 refs. F-TS-9511/V.
Order from LC or SLA mi$3.60, ph$9.30 59-14135

Trans. of Zeitschrift für Angewandte Physik (West Germany) 1949, v. 1, no. 6, p. 245-252; no. 11, p. 509-516.

Nifontoff, Nicolas.
STUDY OF ELECTRICAL CONDUCTIVITY BY TUNNEL EFFECT OF AN IMPERFECT CONTACT BETWEEN TWO IDENTICAL METALS (Étude de la Conductivité Électrique par Effet Tunnel d'un Contact Imparfait entre deux Métaux Identiques). [1959] [4]p. 5 refs. No. 247.
Order from SLA mi$1.80, ph$1.80 59-17914

Trans. of Academie de Sciences, Paris. Comptes Rendus (France) 1953, v. 236, no. 26, p. 2486-2488.

Nifontoff, Nicolas.
STUDY OF THE POTENTIAL BARRIER SEPARATING TWO ELECTRODES OF THE SAME METAL BROUGHT TO DIFFERENT POTENTIALS (Étude de la Barrière de Potentiel Séparant deux Électrodes de Même Metal Portées a des Potentiels Différents). [1959] [4]p. 8 refs. No. 246.
Order from SLA mi$1.80, ph$1.80 59-17915

Trans. of Academie de Sciences, Paris. Comptes Rendus (France) 1953, v. 236, no. 16, p. 1538-1540.

Results are presented of a study relative to the transparence of a potential barrier intervening in the tunnel effect.

Zhigulev, V. N.
THEORY OF AN ELECTRICAL DISCHARGE IN A MOVING CONDUCTING MEDIUM. [1959] 4p. 3 refs.
Order from MDF $4.00 MDF Z-119

Trans. of Akademiya Nauk SSSR. Doklady, 1959, v. 124, no. 6, p. 1226-1228.

The new phenomenon of compressing an electrical discharge in a moving conducting medium, which can be used to obtain high temperatures, is discussed. (Author)

Zhigulev, V. N.
THEORY OF THE MAGNETIC BOUNDARY LAYER. [1959] 5p. 4 refs.
Order from MDF $5.00 MDF Z-118

Trans. of Akademiya Nauk SSSR. Doklady, 1959, v. 124, no. 5, p. 1001-1004.

Examples are presented which illustrate the fact that a moving plasma is screened from the external magnetic field and from the electric currents flowing therein; the thickness of the screening layer, called the magnetic boundary layer, has an order of $1/\sqrt{Re_m}$ for motions with large magnetic Reynolds numbers. (Author)

Molecular Physics and Spectroscopy

Alekseyevskiy, N. Ye., Prudkovskiy, G. P. and others.
THE USE OF AN INHOMOGENEOUS MAGNETIC FIELD TO INCREASE THE RESOLUTION OF THE MASS-SPECTROMETER, tr. by V. Beak. 1955 [8]p. 9 refs. A. E. R. E. Lib/Trans. 629.
Order from SLA mi$1.80, ph$1.80 59-17544

Trans. of Akademiya Nauk SSSR. Doklady, 1955, v. 100, no. 2, p. 229-232.

A number of mass-spectrometer models with a truncated inhomogeneous field in which the ion beam was turned through the angle $2\Phi = 180^{o}$, were constructed in the laboratory. To illustrate the possibilities of the principle expounded, some data on these devices are given. (Extracted from the report)

Kaliteyevskiy, N. I. and Chayka, M. P.
INVESTIGATION OF THE HYPERFINE STRUCTURE OF THE SPECTRA OF PLUTONIUM AND OF URANIUM ISOTOPES, tr. by J. B. Sykes. Nov 55 [6]p. 6 refs. A. E. R. E. Lib/Trans. 634.
Order from SLA mi$1.80, ph$1.80 59-17548

Trans. of Akademiya Nauk SSSR. Doklady, 1955, v. 103, no. 1, p. 49-51.

This paper gives the results of work done in 1952-1954. The mechanical moment of the U^{233} nucleus was determined in November 1952, and that of the Pu^{239} nucleus in January 1953.

Myachenkov, A. and Kichin, N.
SPECTRAL ANALYSIS IN PLANT LABORATORIES (Spektral'nyy Analiz v Laboratorii Predpriyatiya). 8 May 59, 4p. AF 1255784.
Order from LC or SLA mi$1.80, ph$1.80 59-16337

Trans. from Sovetskaya Aviatsiya (USSR) 1959, 18 Feb.

Schuurmans, Philip.
ON THE ANALYSIS OF SOME COMPLEX SPECTRA (Th AND U) (Over de Analyse Van Enige Complex Spectra (Th. En U)). 1955 [76]p. 37 refs. A. E. R. E. Lib/Trans. 513.
Order from SLA mi$4.50, ph$12.30 59-17337

Trans. of [Physica (Netherlands) 1946, ser. 2, v. 12, p. 589-594].

The (jj) coupling of the s-electron is discussed and the hyperfine structure of a number of Pr II levels is considered in view of this coupling. In this way a preliminary analysis of the Pr II spectrum could be made, based on the measurements of White on the hyperfine structure of Pr II lines. In Nd I only five low levels were found, and a considerable number of high levels. A survey is given of the largest Th II system: the system with f-electrons. A number of levels of the configurations $5f7s^2$, 5f6d7s, $5f6d^2$, 5f7p7s, 5f6d7p, $5f^27s$ and $5f^26d$ are identified. The connection between the two systems in Th II has been found with the aid of terms of the configuration fd^2. Nearly half of the 500 terms, belonging to the configurations mentioned above are found. Finally our Th II system is compared with the work of McNALLY, HARRISON and PARK. In Th I terms are found of the configurations $6d^27s^2$, $6d^37s$, $6d7p7s^2$, $6d^27p7s$, $6d^37p$. The U II systems, found in the analysis of the spectrum of uranium is discussed. This system has the following low configurations: $5f^37s^2$, $5f^36d7s$, $5f^36d^2$. A few levels, which might belong to these configurations, are discussed. A derivation of the formulae of the configuration p^3 is given, according to the theory of Slater-Condon-Shortley and a number of formulae, regarding to configurations with f-electrons, are given. (Extracted from the report)

Optics

Abbe, E.
PRÉCIS D'OPTIQUE. FORMATION DES IMAGES DANS LE MICROSCOPE. II. FORMATION DE L'IMAGE D'UN OBJET LUMINEUX EN OPTIQUE ONDULATOIRE, tr. by Carbonnier. 27 Mar 59 [61]p. 15 refs. Trans. no. A 556 (text in French).
Order from SLA mi$3.90, ph$10.80 CEA-tr-A556

Trans. in French of mono. Abbildung von Selbstleuchtern. Kap. II. Abbildung Selbstleuchiender Objekte im Sinne der Wellenlehre, Brunswich, 1910, p. 14-43.

La Monaca, Giorgio.
SYSTEM OF UNIFORM ILLUMINATION OF WIDE TRANSPARENT SURFACES, ESPECIALLY FOR RENDERING OBJECTS, WRITTEN MATTER AND FIGURES VISIBLE, WITH RELATIVE ILLUMINATING MEANS, tr. by J. C. Levy. 20 Apr 59, 6p. (4 figs. omitted). 11 claims.
Order from LC or SLA mi$1.80, ph$1.80 59-16186

Trans. of Italian patent 465,376, Class XVI; applied for 22 Apr 50, granted 25 Aug 51, pub. Dec 52.

Martynov, D. Ya. and Alduseva, V. Ya.
CHANGES IN THE DESIGN OF MICROPHOTOMETER MF-2 TO ALLOW MEASUREMENT OF HIGH DENSITIES (Izmeneniya v Konstruktsii Mikrofotometra MF-2 v Tselyakh Izmereniya Vysokikh Plotnostey). [1959] [10]p. 1 ref. F-TS-9610/V.
Order from LC or SLA mi$1.80, ph$1.80 59-19495

Trans. of *Astronomicheskiy Zhurnal (USSR) 1957, v. 34, no. 3, p. 435-439.

Sinel'nikov, K. D. and Ryazanov, A. N.
RESOLVING POWER OF OPTICAL SYSTEMS INCREASED. [1959] 11p. 6 refs.
Order from LC or SLA mi$2.40 ph$3.30 59-17743

Trans. of Optika i Spektroskopiya (USSR) 1958, v. 5, no. 2 p. 184-190.

A simple slit objective was calculated for checking the results of Toraldo di Francia (Nuovo cimento 9:426, 1952). An aperture of increased resolving power was built. The aperture obtained was investigated by an ordinary scheme for checking Fraunhofer's diffraction lines. The diffraction pattern was measured on an automatically recording MF-4 microphotometer. Two light sources were resolved which cannot be resolved with the uniform objective. The Raleigh criterion that the limiting angular distance at which the sources are resolvable equals $1.22\,\lambda/D$ in the case of a circular objective and λ/D in the case of a slit objective is correct only for a uniform objective. It is wrong if the uniform objective is replaced by a compound objective.

Slyusarev, G. G. and Kulikovskaya, N. I.
DISTRIBUTION OF LIGHT ENERGY CHANGED IN THE DIFFRACTION PATTERN BY VARIABLE TRANSMITTANCE FILTERS. [1959] 13p. 20 refs.
Order from LC or SLA mi$2.40, ph$3.30 59-17223

Trans. of Optika i Spektroskopiya (USSR) 1958, v. 4, no. 4, p. 486-493.

Antonov-Ramanovskiy, V. V. and Epshteyn, M. I.
DETERMINATION OF THE ABSOLUTE YIELD OF LUMINESCENCE OF POWDERED PHOSPHORS, tr. by J. J. Loferski. [1959] [9]p. 15 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-17715

Trans. of Akademiya Nauk SSSR. Doklady [1959] v. 64 [no. 4] p. 483-486.

Measurements of absolute yield were made for $ZnS \cdot Cu$ and $Zn_2 Si O_4 \cdot Mn$., For the phosphor $Zn S \cdot Cu$, the magnitude of $\rho\lambda_\mu$ has its maximum value, equal to about 0.5 at about 360 mμ; to either side of this maximum $\rho\lambda$ falls off relatively slowly. The situation is different for the phosphor $Zn_2 SiO_4 \cdot Mn$. From about 310 mμ to about 260 mμ, $\rho\lambda$ increases rapidly from close to zero to a value of about 0.6, which as far as can be judged from the accuracy of the experiments, does not change up to about 220 mμ. (Extracted from the report)

Broser, Immanuel and Warminsky, Ruth.
ON THE ELECTRICAL CONDUCTIVITY OF CADMIUM SULPHIDE CRYSTALS, WHICH IS CONNECTED WITH PHOSPHORESCENCE (Uber die mit Phosphoreszenz Verknüpfte Elektrische Leitfähigkeit von Cadmiumsulfid-Kristallen). [1959] [19]p. 21 refs. No. 218.
Order from SLA mi$2.40, ph$3.30 59-17920

Trans. of Zeitschrift für Physik (West Germany) 1952, v. 133, no. 3, p. 340-361.

The influence of points of adhesion on the physical properties of a well-activated crystal phosphor, particularly on the electrical conductivity, is discussed with the help of the bands model. To support the theoretical considerations, measurements of the luminescence and photo-conductivity on CdS crystals are used. It is shown that by means of the number and the energetic position of the points of adhesion, the conductivity which is connected with phosphorescence is unmistakably established as a function of the excitation density, the time, and the temperature. The comparison between theory and experiment gives an extensive insight into the structure of the crystal phosphor which is investigated and furnishes suggestions for as advantageous as possible a use of cadmium sulphide for the detection of weak ray intensities. (Author)

Fues, E. and Stumpf, H.
CLASSICAL NON-LINEAR LATTICE STATICS OF DISTORTED CRYSTAL STRUCTURES, tr. by F. Hudswell. Dec 55 [23]p. 5 refs. A. E. R. E. Lib/Trans. 630.
Order from SLA mi$2.70, ph$4.80 59-17545

Trans. of Zeitschrift für Naturforschung (West Germany) 1955, v. 10a, no. 2, p. 136-145.

A method is developed, using the classical mechanical point-model, for the determination of the equilibrium states of lattices which are disturbed by atoms in interstitial lattice positions, dislocations, etc. The binding forces which occur in the disturbed positions, and which deviate from those of the remaining lattice environment, are of interest in connection with the dynamics of the lattice. A simple example, in which one atom is stored at an interstitial lattice position in the closest packing of spheres, shows that for physically significant particle potentials the restoring forces which occur at the disturbed atom through oscillation increase to 40 to 50 times the value in the undisturbed lattice environment. The equilibrium configuration, and its dependence on the chosen potential, is described in detail.

Fujisaki, Haruo, Matsumura, Tetsuo, and Tanabe, Yasaku.
THE ELECTRIC CHARACTER AND THE ELECTRO-LUMINESCENCE OF ZnS CRYSTALS WITH VARIOUS METAL ELECTRODES. [1959] [23]p. 14 refs.
Order from SLA mi$2.70, $4.80 59-17899

Trans. from [Tohoku Daigaku Kagakukeisoku Kenkyusho Hokoku] (Japan) 1958, v. 7, no. 2.

Various metals were deposited by vacuum evaporation on bar-shaped or plate-shaped, pure ZnS crystals, and studies were made of the diffusion of the deposited metals into the crystals, the electric character of the crystal with the deposited metals as electrodes, and electroluminescence in the presence of an electric field. In and Al were employed as electrodes; Cu, Ag, and Mn as activators of electroluminescence. These metals covered the central part of the crystals and the same metals were deposited by vacuum evaporation on the two ends of a surface of the crystal, which were used as electrodes when electric field was applied on the crystal. The measurements of electric resistance showed no substance making ohmic Contact with ZnS crystals. The electric resistance of the crystals with two different metals as electrodes was hardly affected by the polarity of the applied field. Even the weak luminescent crystal at ultraviolet radiation showed electroluminescence. The crystals with Mn metals show bright electroluminescence without exception. The mechanism of electroluminescence of ZnS crystals having some metals deposited as electrodes seems to be associated with the carrier injection from the electrodes and atomic diffusion of the deposited metals.

Gans, François, Lagrenaudie, Jean, and Seguin, Paul.
PREPARATION AND PROPERTIES OF SEMICONDUCTING ARSENIDES (Sur la Préparation et les Propriétés d'Arseniures Semi-Conducteurs). [1959] [4]p. 5 refs. No. 253.
Order from SLA mi$1.80, ph$1.80 59-17903

Trans. of Académie des Sciences, Paris. Comptes Rendus (France) 1953, v. 237, no. 4, p. 310-313.

Geist, D. and Seiler, K.
THE TEMPERATURE DEPENDENCE OF THE BLOCKING CURRENT OF p-n TRANSITIONS IN GERMANIUM (Die Temperaturabhängigkeit des Sperrstroms von p-a Übergängen in Germanium) [1959] [3]p. 7 refs. No. 202.
Order from SLA mi$1.80, ph$1.80 59-17917

Trans. of die Naturwissenschaften (West Germany) 1952, v. 39, no. 17, p. 401.

Herforth, L[ieselott].
SUR LE PROBLEME DE L'ETUDE AUX RAYONS X DE STRUCTURES FINES A L'AIDE DE MESURES DE FLUORESCENCES. [1959] 3p. 1 ref. [CEA-A551] (text in French).
Order from SLA mi$1.80, ph$1.80 CEA-tr-A551

Trans. in French of die Naturwissenschaften (West Germany) 1955, v. 42 [no. 13] p. 412.

The use of a secondary emission amplifier for direct measurement of fluorescence provoked by x-ray excitation is discussed.

Gremmelmaier, A. and Madelung, O.
PRODUCTION OF MONOCRYSTALS OF THE SEMICONDUCTING COMPOUNDS OF THE A^{III} B^{V} TYPE. [1959] [5]p. 6 refs. No. 249.
Order from SLA mi$1.80, ph$1.80 59-17911

Trans. of Zeitschrift für Naturforschung (West Germany) 1953, v. 8a, no. 5, p. 333.

Heumann, Th[eodor] and Walther, G[untram].
L'EFFET KIRDENDALL [SIC] DANS LES ALLIAGES ARGENT-OR, DANS TOUT LE DOMAINE DE CONCENTRATIONS, tr. by Klersy. 19 May 59 [19]p. (1 table, refs. omitted) Trans. no. A 385 (text in French).
Order from SLA mi$2.40, ph$3.30 CEA-tr-A385 (59-17576)
Trans. in French of Z[eitschrift für] Metallk[unde] (West Germany) 1957, v. 48, no. 4, p. 151-157.

Kitaygorodskiy, A. I. and Mnyukh, Yu. V.
A TRICLINIC MODIFICATION OF POLYTHENE. [1959] 2p. 6 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-20145

Trans. of Akademiya Nauk SSSR. Doklady, 1958, v. 121, no. 1, p. 115-116.

The measurement of the interplanar distances and the comparison of intensities have confirmed definitely the existence in the usual conditions of a triclinic modification of polythene. The corresponding data are tabulated. The comparison of the X-ray spectra of different samples of polythene shows, that the reflections, corresponding to the triclinic modification of polythene, are relatively more intense in the cases when the crystalline picture as a whole has a higher perfection (a greater number of clear lines, an absence of amorphous dispersion). (Extracted from the report)

Kleinknecht, Hans.
SILICON MONOCRYSTAL RODS (Silizium-Einkristallstäbe). [1959] [4]p. 3 refs. No. 201.
Order from SLA mi$1.80, ph$1.80 59-17918

Trans. of die Naturwissenschaften (West Germany) 1952, v. 39, no. 17, p. 400-401.

Lautz, Günter.
ON THE THEORY OF THE DIFFERENTIAL THERMOELECTRIC FORCE OF SEMICONDUCTORS (Zur Theorie der Differentiellen Thermokraft von Halbleitern). [1959] [17]p. 12 refs. No. 259.
Order from SLA mi$2.40, ph$3.30 59-17908

Trans. of Zeitschrift für Naturforschung (West Germany) 1953, v. 8a, no. 6, p. 361-371.

A brief discussion of individual experimental results regarding the temperature-dependence of the thermoelectric force shows a qualitative agreement with the present theoretical formulas; but the experimental data are not sufficient in many cases for a quantitative comparison. (Extracted from the report)

Matsumura, Tetsuo, and Tanabe, Yasaku.
ELECTROLUMINESCENCE OF ZnS SINGLE CRYSTAL. [1959] [14]p. 16 refs.
Order from SLA mi$2.40, ph$3.30 59-17900

Trans. from [Tohoku Daigaku Kagakukeisoku Kenkyusho Hokoku] (Japan) 1958, v. 7, no. 2.

The temperature dependence of the electroluminescence, the current in the crystals, and thermoluminescence were measured. Experimental evidence is presented that electroluminescence accompanies the increase of conduction electrons.

Mel'nik, B. G., Mel'nik, I. G., and Gutin, S. S.
ON ELECTRON-HOLE TRANSITIONS IN POINT CONTACTS SOLID RECTIFIERS. [1959] 4p. 3 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-20137

Trans. of Akademiya Nauk SSSR. Doklady, 1958, v. 121, no. 5, p. 852-854.

Tests are described in which the formation of an area with a gap conductivity in the contact diode point during the effect of an electrical impulse on an electronic germanium was confirmed.

Moll, Alexander.
SOME PROPERTIES OF THIN BARIUM-STRONTIUM TITANATE SINGLE CRYSTAL FILMS EVAPORATED IN AN ELECTRIC FIELD. [1959] 9p. (7 figs. [illus.] omitted) 15 refs.
Order from SLA mi$1.80, ph$1.80 59-17741

Trans. of Zeitschrift für Angewandte Physik (West Germany) 1958, v. 10, no. 9, p. 410-416.
Another translation is available from LC or SLA mi$2.70, ph$4.80 as 59-18320, BuShips Trans-684, May 59 [23]p.

Ferroelectric barium-strontium titanate single crystals were grown in an electric field from the vapor phase. The single crystals with ordered domains, produced with a controlled condensation temperature of

about 200°C, were investigated in detail. The dielectric constant decreased and tended to a limiting value ($\varepsilon \to 9000$) in the 1000- to 2000-mc range. In thicker films an unsteady aging process was observed, which is ascribed to the numerous faulty points in thicker layers and the deflections of the domain walls caused thereby. The breakdown strength of the films is as high as 5×10^5 v/cm.

Schottky, W.
ON THE QUESTION OF DEFECT SEMICONDUCTION IN CRYSTALLINE SELENIUM (Aur Frage der Defekthalbleitung im Kristallinen Selen). [1959] [4]p. 1 ref. No. 254.
Order from SLA mi$1.80, ph$1.80 59-17907

Trans. of Zeitschrift für Naturforschung (West Germany) 1953, v. 8a, no. 8, p. 457-459.

The findings of the preceding paper by R. Diestel (Z. Naturforsch. 8a: 453-57, 1953) concerning the $E_0 - \zeta$ values of selenium specimens show that the ratio, $(n_+)_{Hall}/(n_+)_{thermo}$, of the true defect electron concentration as determined by the Hall-effect measurement to that determined by the thermoforce measurement is 80 or higher. This suggests that the defect semiconduction in crystalline selenium is not carried by free defect electrons, but is of the type of disturbance band conduction first discussed by G. Busch for SiC, the electrons or defect electrons being in a position, with the overcoming of relatively broad and high potential hills, to go over into occupied and unoccupied disturbance point levels.

Tromel, G. Zaminer, C.
EXAMINATION OF BASIC SLAG CRYSTALS; INVESTIGATIONS ON CRYSTALS OF THOMAS SLAG. [1959].
Order from BISI ₤3 10s BISITS-1356

Trans. of Arch[iv fur das] Eisenhut[tenwesen] (West Germany) 1959 [v. 30] Apr, p. 205-209.

Tsien, Chi-tsiang.
ON THE MECHANISM OF INTERNAL FRICTION PEAK OF INTERSTITIAL ATOMS IN THE FACE CENTRE CUBIC CRYSTAL. [1959].
Order from BISI ₤13 10s BISITS-1397

Trans. of [Chin Shu Hsueh Pao] (Chinese People's Republic) 1959, no. 1, p. 69-74.

Weber, Heinrich.
THE DISCOLORATION OF MAGNESIUM OXIDE CRYSTALS BY ITS OWN LATTICE MEMBERS, tr. by F. Hudswell. 1955 [14]p. 6 refs. A. E. R. E. Lib/Trans. 566.
Order from SLA mi$2.40, ph$3.30 59-17502

Trans. of Zeitschrift für Physik (West Germany) 1951, v. 130 [no. 3] p. 392-402.

This paper treats of the discoloration of magnesium oxide crystals by an excess of one of the two components and by photochemical dissociations. The experimental results are discussed. (Author)

Weissenbach, W.
RELATIONS BETWEEN THE PARTICLE SIZE AND ENERGY CONTENT OF MAGNESIUM OXIDE, tr. by F. Hudswell. May 55 [10]p. 6 refs. A. E. R. E. Lib/Trans. 564.
Order from SLA mi$1.80, ph$1.80 59-17500

Trans. of Radex Rundschau (Austria) 1951, no. 6, p. 257-260.

The energy content of periclase crystals of very small dimensions is computed in accordance with the modern concept of molecular structure, and the result is compared with calorimetric, X-ray and electron microscope experimental figures. (Author)

Welker, H.
NEW SEMICONDUCTING COMPOUNDS II (Über Neue Halbleitende Verbindungen II). [1959] [6]p. 3 refs. No. 244.
Order from SLA mi$1.80, ph$1.80 59-17912

Trans. of Zeitschrift für Naturforschung (West Germany) 1953, v. 8a, no. 4, p. 248-251.

The present paper furnishes conductivity measurements on various specimens of the crystalline compounds InSb, GaSb and AlSb as a function of the temperature. The widths of the forbidden zones are determined. Rectifier characteristic lines of AlSb, GaSb, GaAs, InP and transistor characteristic lines of InP are also given.

Theoretical Physics

D'yakov, S. P.
THE STABILITY OF SHOCK WAVES. INVESTIGATION OF THE PROBLEM OF THE STABILITY OF SHOCK WAVES IN ARBITRARY MEDIA, tr. by V. Beak. 1956 [15]p. A. E. R. E. Lib/Trans. 648.
Order from SLA mi$2.40, ph$3.30 59-17557

Trans. of Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki (USSR) 1954, v. 27, no. 3(9) p. 288-295.

The following table (extracted from the report) summarizes the results of the investigation:

Condition	Results
$\left(\frac{\Delta V}{\delta p}\right)_H < -\frac{1}{j^2}$	Absolute instability
$-\frac{1}{j^2} < \left(\frac{\Delta V}{\delta p}\right)_H < \frac{1}{j^2}\,\frac{1+2(v^2/c^2)-(vv_0/c^2)}{1+(vv_0/c^2)}$	Stability
$\frac{1}{j^2}\,\frac{1+2(v^2/c^2)-(vv_0/c^2)}{1+(vv_0/c^2)} < \left(\frac{\Delta V}{\delta p}\right)_H < \frac{1}{j^2}\left(1+2\frac{v}{c}\right)$	Possibility of spontaneous emission of sound
$\left(\frac{\Delta V}{\delta p}\right)_H > \frac{1}{j^2}\left(1+2\frac{v}{c}\right)$	Absolute instability

Lyubov, B. Ya. and Osip'yan, Yu. A.
ON THE KINETICS OF THE ISOTHERMAL MARTENSITE TRANSFORMATION CLOSE TO ABSOLUTE ZERO, tr. by J. B. Sykes. Sep 55 [8]p. (1 table omitted) 7 refs. A. E. R. E. Lib/Trans. 585.
Order from SLA mi$1.80, ph$1.80 59-17487

Trans. of Akademiya Nauk SSSR. Doklady, 1955, v. 101, no. 5, p. 853-856.

Results of a quantum mechanical study show that, at temperatures close to absolute zero, the rate of the martensite transformation no longer depends on the temperature, and this is the clearer, the less the width of the barrier which the atoms pass in the transformation. Thus the vibrational energy of the atoms is the chief factor which determinates the rate of the martensite transformation, as of other phase transformations (together with the thermodynamical conditions, of course).

Thermodynamics

Dorfman, L. A.
THERMAL BOUNDARY LAYER ON A ROTATING DISC. [1959] 4p. 5 refs.
Order from MDF $4.00 MDF D-128

Trans. of A[kademiya] N[auk] SSSR. Doklady, 1958, v. 119, no. 6, p. 1110-1112.

The problem is approached by: (1) comparing the equation of the tangential velocities of the average turbulent motion of air incompressible fluid in the boundary layer of a rotating disc

$$v_r \frac{\partial v_\phi}{\partial r} + \frac{v_r v_\phi}{r} + v_z \frac{\partial v}{\partial z} = \frac{\partial}{\partial z}\left(\nu \frac{\partial v_\phi}{\partial z} - \overline{v' v'_\phi}\right),$$

with the energy equation without dissipative terms

$$v_r \frac{\partial T}{\partial r} + v_z \frac{\partial T}{\partial z} = \frac{\partial}{\partial z}\left(a \frac{\partial T}{\partial z} - \overline{v'_z T'}\right),$$

where v_r, v_ϕ, v_z, T are the average values of the velocity components and the temperature and the primed values are the pulsating components (the bar above is the average sign), ν is the kinematic viscosity, and $a = \lambda / c_p \rho$ is the temperature conduction; and (2) computing the heat emission for an arbitrary temperature gradient. The heat balance is formed for an annular element of the thermal boundary layer of thickness σ_T and width dr at a given radius r. The heat flux per second through this element in a radial direction, $c_p \rho \, d\left(\int_0^{\sigma_T} 2\pi \, r v_r T dz\right)$, is compensated by the heat emission from the disc surface in an annular strip with area $2\pi \, rdr$, $2\pi \, rqdr$ of $c_p \rho \frac{d}{dr}\left(\int_0^{\sigma_T} r v_r \, Tdz\right) = rq$.

Kastelin, O. N., Mit'kina, E. A., and Predvoditelev, A. S.
MELTING OF A BODY IN A SUPERSONIC FLOW. [1959] 3p. K-174.
Order from MDF $2.00 MDF K-174

Trans. of A[kademiya] N[auk] SSSR. O[tdeleniye] T[ekhnicheskikh] N[auk]. Izvestiya. Energ[etika] i Avto[matika] 1959, no. 2, p. 140-141.

Results, obtained on models made from Wood's alloy at M = 1.7, and a total adiabatic stagnation temperature of 88 to 89° C. indicate that the most intense destruction of a body in a supersonic flow occurs behind the shockwave on the nose. The cone melting occurred at a constant rate, independent of the cone vertex angle.

Katarzhis, A. K., Kosterin, S. I., and Sheynin, B. I.
AN ELECTRIC METHOD OF RECORDING THE STRATIFICATION OF THE STEAM-WATER MIXTURE, by J. B. Sykes. 1955 [10]p. 1 ref. A. E. R. E. Lib/Trans. 590.
Order from SLA mi$1.80, ph$1.80 59-17491

Trans. of Akademiya Nauk SSSR. Otdeleniye Tekhnicheskikh Nauk. Izvestiya, 1955, no. 2, p. 132-136.

The theoretical justification is given for applying the proposed electric method to record the structure of the flow of the steam-water mixture. This method was used to record the stratification of the steam-water mixture. (Author)

RESEARCH METHODS, TECHNIQUES AND EQUIPMENT

Briche, René.
STANDARD MATERIAL FOR SPATIAL REPRESENTATION OF MOLECULES AND CRYSTALLINE STRUCTURES, tr. by CST. 14 Apr 59, 7p.
Order from LC or SLA mi$1.80, ph$1.80 59-16174

Trans. of French patent 1,076,501, Group 18, Class 35; applied for 28 Apr 53, granted 21 Apr 54, pub. 27 Oct 54.

The boring and shaping of the balls, and their joining means, have been worked out in such a way as to permit representing structures and their principal properties with materials which are as simple and uniform as possible--indeed permitting even the use of a single type of perforated sphere. (Extracted from the report) (See also 59-16175)

Dechevrens, Marc.
CAMPYLOGRAPH OR CURVE SCRIBER, tr. by PCC. 30 Apr 59, 12p. (1 plate omitted).
Order from LC or SLA mi$2.40, ph$3.30 59-16165

Trans. of French patent 300,751, Group XII, Class 3; applied for 29 May 1900, granted 14 Sep 1900.

Lassaut, André-Louis-Alexandre.
UNIVERSAL MOLECULAR MODELS, tr. by CST. 14 Apr 59, 5p. (13 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-16175

Trans. of French patent 1,101,229, G[roup] 18, Cl[ass] 35; applied for 17 Mar 54, granted 20 Apr 55, pub. 4 Oct 55.

These models are made universal by using long, short, or pliable bonds, positioned or not, using the same receiving parts in the same molecular models. They can be used for compact or open structures or other kinds demanded by the demonstration, teaching, research, or scientific or educational games. (See also 59-16174)

Mayer, H[erbert] and Behrndt, K[laus].
UNE NOUVELLE MICROBALANCE EN QUARTZ POUR DES TRAVAUX EFFECTUES DANS LE VIDE POUSSE, tr. by Pierre Faller. 21 Feb 59 [16]p. [refs. omitted]. Trans. no. A 531 (text in French).
Order from SLA mi$2.40, ph$3.30 CEA-tr-A531

Trans. in French of Z[eitschrift fur] Phys[ik] (West Germany) 1957, v. 147, no. 4, p. 499-506.

A quartz microbalance is described which can be mounted in a vacuum apparatus. Manipulation is carried out from the exterior. The instrument is strong enough to stand stresses inherent in welding, heating etc. Its precision attains 1.10^{-8} g.

Nesmeyanov, A.
NEW SUCCESSES IN SOVIET SCIENCES AND ENGINEERING (Novyye Uspekhi Sovetskoy Nauki i Tekhniki). 15 May 59 [9]p. AF 1255802.
Order from LC or SLA mi$1.80, ph$1.80 59-16332

Trans. of Pravda [Moscow] (USSR) 1959, 22 Apr, p. 2-3.

The names of the scholars who won the 1959 Lenin Prizes are given, together with their achievements which were the basis for the awards.

Communication Theory

Silva, Léon and Legangneux, Yvonne-Marie-Clémence.
SECRET COMMUNICATION DEVICE, tr. by PCC. 15 May 59, 3p. (2 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-16832

Trans. of French patent 745,578, Group 18, Class 2; applied for 23 Jan 32, granted 21 Feb 33, pub. 12 May 33.

The device according to the invention is characterized by the combination of a rod which carries the letters of the alphabet, in principle in the normal order, with a table or support on which said rod can be moved by the user. The letters of the alphabet are represented in this table, in principle in the normal order, in one upper or lower horizontal row and one right-hand or left-hand vertical column. The other horizontal or vertical rows or columns contain the letters of the alphabet, in principle in the normal order, starting from the corresponding original letter of each column or row. (Extracted from the report)

MACHINE CONVERSES WITH MAN [LABORATORY CHIEF DISCUSSES TRANSLATION MACHINE]. [1959] 2p.
Order from LC or SLA mi$1.80, ph$1.80 59-16344

Trans. from Izvestiya (USSR) 1958, 9 July, p. 6.

Answers by N. D. Andreyev, chief of the Leningrad Univ. Experimental Laboratory of Machine Translation are given to the following questions, asked by the Leningrad correspondent of Izvestiya: (1) When and by whom was the possibility of building translating machines proved scientifically? (2) What actually is machine translation and what are its advantages? (3) Is it possible to produce a machine translation of a literary work? (4) What is the laboratory collective working on at the present time? (5) What is "machine" language? (6) What are the promises for the development of machine translation?

STATUS OF MACHINE TRANSLATION. 31 July 59 [6]p. 1 ref. TG 230-T102.
Order from OTS $0.50 59-21128

This is a brief summary of the current status of research in machine translation in England and the United States, as reported by the National Science Foundation. For information on recent Soviet work in this field see PB 141 383T, "Experiments in Machine Translation," a series of articles translated by the U. S. Joint Publications Research Service, from the Russian periodical Voprosy Yazykoznaniya (Problems of Linguistics). (See also 59-11300, 59-11303 59-11324 59-11897)

Photographic Equipment

Oberrauch, Luigi, Oberrauch, Enrico and others.
PHOTOGRAPHIC SHUTTER COMBINED WITH PHOTOELECTRIC-CELL EXPOSURE METER, tr. by PCC. 2 Apr 59, 4p. (2 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-16187

Trans. of Italian patent 489,348, Class XXIII; applied for 28 May 52, granted 19 Jan 54, printed May 55.

The invention is characterized in that a hydraulic control adjusts the exposure time in accordance with the exposure-meter index, in such a manner that the speed of the circulation of the liquid is choked by a slider moved by the index. The motion of the liquid is controlled by a double-action diaphragm connected to the cocking lever of a conventional shutter by means of a rod system, in such a manner that the speed of release of the lever depends upon the motion of the diaphragm. The diaphragm successively operates by means of a system of levers, the curtains of a curtain shutter or the blades of a blade shutter. The exposure meter and the elements which actuate the liquid are mounted in a sealed casing containing the liquid.

Reuther, R. and Reitzenstein, W.
SPECTRAL TRANSMISSION OF PHOTOGRAPHIC OBJECTIVES AND ITS INFLUENCE ON COLOR REPRODUCTION IN AGFACOLOR-REVERSAL FILM FOR DAYLIGHT. [1959] 16p. 9 refs.
Order from SLA mi$2.40, ph$3.30 59-20098

Trans. of Photographische Korrespondenz (Austria) 1959, v. 95, p. 35-42.

Sein, A.
'BUBBLE QUADRANT' FOR CHECKING THE ANGLE OF TILT OF AN AERIAL CAMERA (Uglomer dlya Aerofotoapparata). 31 Dec 58 [3]p. AF 1187471.
Order from LC or SLA mi$1.80, ph$1.80 59-16308

Summary trans. from Sovetskaya Aviatsiya (USSR) 1958, no. 149, 8 June, p. 2.

To check the angle of tilt of aerial cameras installed in an airplane, a special bubble quadrant (uglomer), shown at the end of this report, was designed by Tec. Lt Kharashvili. The bubble quadrant consists of the basic part (1), a holder (2), rotating disk on which a scale is plotted (3), and of a level (4). In order to find the angle of tilt of an aerial camera installed in an airplane, the bubble quadrant is placed on the magazine of the camera. Then the disk of the bubble quadrant is turned clockwise until the bubble of the level is centered. The reading of the scale indicates the angle of tilt of the camera. (Text of the translation is given here in its entirety)

SOCIAL SCIENCES

Mavrodin, V. V.
OUTLINE OF THE UNIVERSITY OF LENINGRAD. 28 Aug 59, 22p. JPRS: L-956-N.
Order from OTS $0.75 59-13845

Trans. of mono. Leningradskiy Universitet, 1957, p. 71-105.

Lepouter and Hannay, B. E. M.
ATOMIC TACTICS AND ORGANIZATION (Tactique et Organisation Atomiques) tr. by A. D. S. [1958] 31p. H-1553.
Order from OTS $1.00 59-11207

Trans. from L'Armee.La Nation (Belgium) 1958, v. 13, publ. in three installments. nos. 2-4.

The tactics and organization that are proposed are intended to satisfy the requirements of a future war (atomic or otherwise) within the framework of NATO.

BOOK REVIEWS

The following book reviews can be ordered by number from LC. Each review includes, in addition to the material shown, a detailed statement of the coverage of the book and a detailed table of contents. The length of each review is indicated at the end of the entry.

BR -SOV/1420
Mironov, Konstantin Andreyevich, and Lev Iosifovich Shipetin
TEPLOTEKHNICHESKIYE IZMERITEL'NYYE PRIBORY; SPROVOCHNYYE MATERIALY (Heat Engineering Measuring Apparatus; Reference Material) 2d ed., rev. and enl. Moscow, Mashgiz, 1958. 896 p. 20,000 copies printed. 15 p. Microfilm $2.40, Photocopy $3.30

BR-CHICOM/1789
Ch'en, wan-ts'ung
TS'ENG YA CHUEH YUAN TS'AI LIAO KUNG I HSUEH (Technology of Laminated Insulating Materials) Peking, K'o hsueh chi shu ch'u pan she, 1958. 134 p. 2,500 copies printed. 4 p. Microfilm $1.80, Photocopy $1.80

BR-SOV/1822
Nelidov, Igor' Yevgen'yevich
EKONOMIKA I ORGANIZATSIYA ENERGOMASHINOSTROYENIYA (Economics and Organization of Power Equipment Manufacturing) Moscow, Gosenergoizdat, 1958. 391 p. Errata slip inserted. 4,300 copies printed. 5p. Microfilm $1.80, Photocopy $1.80

BR-SOV/1844
Tir, Konstantin Vadimovich
KOMPLEKSNYY RASCHET KULACHKOVYKH MEKHANIZMOV (Complete Design of Cam Mechanisms) Kiyev, Mashgiz, 1958. 307 p. 2,500 copies printed. 5p. Microfilm $1.80, Photocopy $1.80

BR-SOV/1855
Soveshchaniye po elektricheskim kontaktam. Moscow. 1956.
ELEKTRICHESKIYE KONTAKTY; TRUDY SOVESHCHANIYA (Electrical Contacts; Transactions of the Conference) Moscow, Gosenergoizdat, 1958. 4,150 copies printed. 6p. Microfilm $1.80, Photocopy $1.80

BR-SOV/1858
Moscow. Stankoinstrumental'nyy institut. Kafedra "Oborudovaniye i tekhnologiya kovki i shtampovki"
ISSLEDOVANIYA V OBLASTI OBORUDOVANIYA I TEKHNOLOGII SHTAMPOVKI (Investigations in the Field of Stamping Equipment and Processing) Moscow, Mashgiz, 1958. 234 p. (Series: Its: Sbornik, Nr 4) Errata slip inserted. 5,500 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/1859
Gorbach, V. L.
KINEMATIKA RABOCHIKH ORGANOV OPTICHESKIKH SHIFOVAL'NO-POLIROVAL'NYKH STANKOV (Kinematics of Working Elements of OpticalGrinding and Polishing Machines) Moscow, Oborongiz, 1958, 107 p. 3,550 copies printed. 2 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/1860
Yastrzhembskiy, Andrey Stanislavovich
OSNOVNYYE NAPRAVLENIYA RAZVITIYA UCHEBNIKOV PO TEKHNICHESKOY TERMODINAMIKE (Basic Trends in the Development of Textbooks on Engineering Thermodynamics) Moscow, Gosenergoizdat, 1958. 3,200 p. Errata slip inserted. 3,200 copies printed. 4 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/1861
Moscow. Vsesoyuznyy proyektno-tekhnologicheskiy institut tyazhelogo mashinostroyeniya
NORMATIVY DLYA TEKHNICHESKOGO NORMIROVANIYA RABOT PRI AVTOMATICHESKOY ELEKTRODUGOVOY SVARKE POD SLOYEM FLYUSA (Time Standards for Automatic Submerged Arc Welding) Moscow, Mashgiz, 1958. 154 p. 7,800 copies printed. 3p. Microfilm $1.80, Photocopy $1.80

BR-SOV/1862
Ostrogradskiy, Mikhail Vasil'yevich
IZBRANNYYE TRUDY (Selected Works) Moscow, Izd-vo AN SSSR, 1958. 583 p. (Series: AN SSSR. Klassiki nauki) 3p. Microfilm $1.80, Photocopy $1.80

BR-SOV/1863
Moscow. Tsentral'nyy institut informatsii tsvetnoy metallurgii
O PRIMENENII TVERDYKH SPLAVOV I MINERALOKERAMIKI; SBORNIK STATEY (Use of Hard Alloys and Cermets; Collection of Articles) Moscow, 1957. 87 p. 2,000 copies printed. 1p. Microfilm $1.80, Photocopy $1.80

BR-SOV/1869
Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii
ELEKTROPRIVOD REVERSIVNYKH PROKATNYKH STANOV S ELECTROMASHINNYM UPRAVLENIYEM (Electric Drive of Reversing Rolling Mills With Dynamoelectric Control) Moscow, Metallurgizdat, 1958. 257 p. (Series: Its: Sbornik trudov, vyp. 14) Errata slip inserted. 3,800 copies printed. 3p. Microfilm $1.80, Photocopy $1.80

BR-SOV/1873
Kuznetsov, Nikolay Ivanovich
ISPYTANIYA I EKSPLUTATSIYA ELEKTROMUFT SKOL'ZHENIYA (Testing and Use of Electric Slip Couplings) Moscow, Gosenergoizdat, 1959. 99 p. Errata slip inserted. 7,950 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/1878
Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii. Institut stali
PROKATNOYE I TRUBOPROKATNOYE PROIZVODSTVO (Rolling and Tube Rolling) Moscow, Metallurgizdat, 1959. 268 p. (Series: Its: Sbornik trudov, vyp. 16) Errata slip inserted. 2,500 copies printed. 5p. Microfilm $1.80, Photocopy $1.80

BR-SOV/1884
Leningrad. Inzhenerno-ekonomicheskiy institut.
NEKOTORYYE VOPROSY EKONOMIKI MASHINOSTROYENIYA (Some Problems on the Economics of Machine-Building) [Leningrad] 1957. 176 p. (Series: Its: Trudy, vyp. 18) Errata slip inserted. 2,025 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/1888
Moscow. Vyssheye tekhnicheskoye uchilishche
PROKATNYYE STANY I TEKHNOLOGIYA PROKATKI; SBORNIK STATEY (Rolling Mills and Processing by Rolling; Collection of Articles) Moscow, Mashgiz, 1958. 208 p. (Series: Its: [Trudy] 84) Errata slip inserted. 3,000 copies printed. 3p. Microfilm $1.80, Photocopy $1.80

BR-SOV/1890
Zabelin, Boris Mikhaylovich
SPETSIALIZATSIYA I KOOPERIROVANIYE V MASHINOSTROYENII SSSR; PO MATERIALAM VAGONOSTROYENIYA I DRUGIKH OTRASLEY (Specialization and Cooperation in the USSR Machine-Building Industry; According to Materials of Car Building and Other Branches) Moscow, Mashgiz, 1958. 146 p. 5,000 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/1891
Tsentral'nyy nauchno-issledovatel'skiy institut tekhnologii i mashinostroyeniya
ELEKTROTERMICHESKAYA OBRABOTKA I ELEKTROISKROVOYE UPROCHNENIYE DETALEY; [SBORNIK] (Electric Heat Treatment and Electrospark Hardening of Parts; Collection of Articles) Moscow, Mashgiz, 1958. 214 p. (Series: Its: [Trudy] kn. 89) Errata slip inserted. 5,600 copies printed. 4p. Microfilm $1.80, Photocopy $1.80

BR-SOV/1892
Davydov, Mitrofan Mikhaylovich, and Mikhail Zinov'yevich Tsunts
OT VOLKHOVA DO AMURA (From the Volkhov to the Amur), Moscow, Izd-vo "Sovetskaya Rossiya," 1958. 325 p. 20,000 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/1894
Privezentsev, V. A.
OBMOTOCHNYYE PROVODA S EMALYEVOY I VOLOKNISTOY IZOLYATSIYEY (Magnet Wires With Enamel and Fiber Insulation) 2nd ed., rev. and enl. Moscow, Gosenergoizdat, 1952. 432 p. Errata slip inserted. 5,000 copies printed. 6p. Microfilm $1.80, Photocopy $1.80

BR-SOV/1898
Yevsikov, Anatoliy Vasil'yevich and Viktor Yakovlevich Popov
TEKHNOLOGIYA PROIZVODSTVA I REMONTA TOPLIVNOY APPARATURY DIZELEY (Methods of Manufacture and Repair of Diesel Engine Fuel Equipment) Moscow, Mashgiz, 1958. 308 p. Errata slip inserted. 5,000 copies printed. 3p. Microfilm $1.80, Photocopy $1.80

BR-SOV/1899
Akademiya nauk Belorusskoy SSR. Institut fiziki i matematiki
TRUDY, VYP. 2. (Transactions of the Institute of Physics and Mathematics, Belorussian SSSR Academy of Sciences Nr 2) Minsk, 1957. 283 p. Errata slip inserted. 750 copies printed. 3p. Microfilm $1.80, Photocopy $1.80

BR-SOV/1901
Tarasevich, Yuriy Sergeyevich
KONSTRUIROVANIYE SHTAMPOV DLYA KHOLODNOY SHTAMPOVKI (Designing Dies for Cold Pressing) Kiyev, Mashgiz, 1958. 187 p. 13,500 copies printed. 4p. Microfilm $1.80, Photocopy $1.80

BR-SOV/1902
USSR. Gosudarstvennyy nauchno- tekhnicheskiy komitet
SPRAVOCHNIK PO PROMYSHLENNYM VZRYVCHATYM MATERIALAM (Handbook on

Industrial Explosives) Moscow, Ugletekhizdat, 1958. 71p. Errata slip inserted. 20,000 copies printed. 4 p. $1.80 Microfilm $1.80 Photocopy

BR-SOV/1908
Stupel', Fayvel' Aronovich
INDUKTIVNYYE I INDUKTSIONNYYE PREOBRAZOVATELI MEKHANICHESKIKH VELICHIN: USTROYSTVO, SKHEMY, RASCHET (Inductance and Induction Transducers of Mechanical Quantities; Construction, Circuits, Calculation) Kharkov, Izd-vo Khar'Kovskogo univ., 1958. 102 p. Errata slip inserted. 5000 copies printed. 2 p. Microfilm $1.80, Photocopy $1.80

BR-SOV/1909
Koroli, O. Ye., Docent,
PRYAMOLINEYNOYE KOLEBATEL'NOYE DVIZHENIYE MATERIAL'NOY TOCHKI; PIS'MENNYYE LEKTSII (Rectilinear Vibrational Motion of a Particle; Correspondence Lectures) Leningrad, 1958. 61p. Errata slip inserted. 1,000 copies printed. 2 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/1918
Shaumyan, Grigor Arutyunovich,
AVTOMATIZATSIYA PROIZVODSTVENNYKH PROTSESSOV V MASHINOSTROYENII (Automatic Control of Machinery Manufacturing Processes) Moscow, Trudrezervizdat, 1958. 143 p. (Series: Novaya tekhnika i peredovyye metody truda) 10,000 copies printed. 2 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/1919
Demkov, Yuriy Nikolayevich
VARIATSIONNYYE PRINTSIPY V TEORII STOLKNOVENIY (Variational Principles in the Theory of Collisions) Moscow, Fizmatgiz, 1958. 168 p. 6,000 copies printed. 3 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/1921
Milovanova, Lidiya Nikolayevna
FUNKTSII I IKH ISSLEDOVANIYE (Functions and Their Study) Moscow, Izd-vo Akad. Pedagog. nauk RSFSR, 1958. 122 p. Errata slip inserted. (Series: Pedagogicheskaya biblioteka Uchitelya) 17,000 copies printed. 3 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/1930
Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut zvukozapisi
TRUDY... Vyp. 2. (Transactions of the All-Union Sound-recording Scientific Institute) Nr 2. Moscow, 1957. 164 p. Errata slip inserted. 1,000 copies printed. 4 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/1935
Vsesoyuznyy matematicheskiy s"yezd. 3d, Moscow, 1956
TRUDY. T. 3: OBZORNYYE DOKLADY (Transactions of the 3d All-Union Mathematics Congress. Vol. 3: Survey reports) Moscow, Izd-vo AN SSSR, 1958. 596 p. 3,000 copies printed. 6 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/1947
Moscow. Vyssheye tekhnicheskoye uchilishche im. N. E. Baumana.
POVYSHENIYE DOLGOVECHNOSTI DETALEY MASHIN; SBORNIK STATEY (Extending the Service Life of Machine Parts; Collection of Articles) Moscow, Mashgiz, 1959. 161 p. (Series: Its : [Trudy] 91) Errata slip inserted. 6,000 copies printed. 2 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/1950
Vasil'yeva, Nataliya Petrovna, Ol'ga Alekseyevna Sedykh, and Mikhail Aleksandrovich Boyarchenkov
PROYEKTIROVANIYE MAGNITNYKH USILITELEY (Design of Magnetic Amplifiers) Moscow, Gosenergoizdat, 1959. 335p. 25,000 copies printed. 4 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/1956
Lastovskiy, Rostislav Petrovich, and Yudif' Isaakovna Vaynshteyn
TECHNICHESKIY ANALIZ V PROIZVODSTVE PROMEZHUTOCHNYKH PRODUKTOV I KRASITELEY (Technical Analysis in the Manufacture of Dyes and Intermediate Products) 3rd ed. Moscow, Goskhimizdat, 1958. 495 p. Errata slip inserted. 4,000 copies printed. 18 p. Microfilm $2.40 Photocopy $3.30

BR-SOV/1960
Vsesoyuznyy neftyanoy nauchno-issledovatel'skiy geologorazvedochnyy institut
GEOKHIMICHESKIY SBORNIK, NO. 5 (Collected Papers on Geochemistry, Nr 5) Leningrad, Gostoptekhizdat, 1958. (Series: Its: Trudy, vyp. 123) 1,000 copies printed. 4 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/1962
ELEKTRONNYY AVTOMATICHESKIY POKAZYVAYUSHCHIY I REGULIRUYUSHCHIY MOST S VRASHCHAYUSHCHEYSYS SHKALOY EMV (EMV Automatic Electronic Direct-reading and Regulating Bridge With a Rotating Scale) Moscow/Pishchepromizdat, 1958/1 v. (Unpaged) [6 p.] 5,000 copies printed. 1 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/1963
KOVRIGIN, VLADIMIR PAVLOVICH, AND VIKTOR PETROVICH CHERNYSHOV TELEVIDENIYE I TELEVIZORY (Television and Television Receivers) /Novosibirsk/ Novosibirskoye Knizhnoye izd-vo, 1958. 61 p. 20,000 copies printed. 2 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/1965
Sokolov, Arseniy Aleksandrovich
VVEDENIYE V KVANTOVUYU ELEKTRODINAMIKU (Introduction to Quantum Electrodynamics) Moscow, Fizmatgiz, 1958. 534 p. 10,000 copies printed. 7 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/1966
Shvets, Ivan Trofimovich
GAZOTURBINNYYE USTANOVKI (Gas Turbine Installations) Kiyev, AN Ukrainskoy SSR, 1958. 122 p. 8,000 copies printed. Errata slip inserted. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/1967
Zinchenko, Nikolay Semenovich
KURS LEKTSIY PO ELEKTRONNOY OPTIKE (Course of Lectures on Electron Optics) Kharkov, Izd-vo Khar'kovskogo univ-ta, 1958. 274 p. Errata slip inserted. 5,000 copies printed. 3p. Microfilm $1.80, Photocopy $1.80

BR-SOV/1970
Serensen, S. V., M. N. Stepnov, V. P. Kogayev, and Ye. V. Giatsintov
ISSLEDOVANIYE RASSEYANIYA KHARAKTERISTIK VYNOSLIVOSTI KONSTRUKTSIONNYKH ALYUMINIYEVYKH SPLAVOV V SVYAZI S TEKHNOLOGIYEY IKH PROIZVODSTVA (Research on the Scattering of Endurance Characteristics of Structural Aluminum Alloys in Connection With Production Technology) Moscow, Oborongiz, 1958. 122 p. 2,600 copies printed. (Series: Moscow. Aviatsionyy tekhnologicheskiy institut. Trudy, vyp. 35) 3p. Microfilm $1.80, Photocopy $1.80

BR-SOV/1973
Voloshin, I. F., A. S. Kasperovich, and A. G. Shashkov
POLUPROVODNIKOVYYE TERMOSOPROTIVLENIYA (Thermistors) Minsk, Izd-vo AN BSSR, 1959. 196 p. Errata slip inserted. 4,000 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/1976
Kiriya, Terentiy Andreyevich
TEORIYA I PRAKTIKA BURENIYA SEKTSIONNYMI TURBOBURAMI (Theory and Practice of Drilling with Sectional Turbine Drills) Baku, Azerabydzhanskoye gos. izd-vo neft. i nauchno-tekhn. lit-ry, 1958. 111 p. 2,000 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/1977
ELEKTRONNYYE AVTOMATICHESKIYE SAMOPISHUSHCHIYE I REGULIRUYUSHCHIYE URAVNOVESHENNYYE MOSTY PEREMENNOGO TOKA EMD (EMD Automatic Electronic Balanced AC Recording and Regulating Bridges) Moscow Pishchepromizdat 1958 1 v., unpaged 5,000 copies printed. 1p. Microfilm $1.80, Photocopy $1.80

BR-SOV/1983
Nedumov, B. I.
VOPROSY RITMICHNOSTI PROIZVODSTVA NA RADIOZAVODAKH (Regularity of Production at Radio-engineering Plants) Moscow, Gosenergoizdat, 1958. 79 p. 2,950 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/1985
Vishenchuk, Igor' Mikhaylovich, Yevgeniy Panteleymonovich Sogolovskiy, and Bentsion Iosifovich Shvetskiy
ELEKTRONNO-LUCHEVOY OSTSILLOGRAF I YEGO PRIMENENIYE V IZMERITEL'NOY TEKHNIKE (Cathode-ray Oscillograph and Its Use in Measuring Technique) Moscow, Fizmatgiz, 1959. 220 p. 10,000 copies printed. 3p. Microfilm $1.80, Photocopy $1.80

BR-SOV/1989
Troitskiy, Petr Aleksandrovich and Stuchevskiy, Mark Pavlovich
PLANIROVANIYE SEBESTOIMOSTI NA MASHINOSTROITEL'NOM ZAVODE; METODIKA I PRAKTIKA (Planning of Costs in a Machine-Manufacturing Plant; Method and Practice) Moscow, Mashgiz, 1959. 249 p. Errata slip inserted. 5,000 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/1990
Sergeyev, Ivan Ivanovich and Mikhail Valentinovich Shklyarskiy
UCHEBNOYE POSOBIYE ELEKTROMEKHANIKA (A Textbook on Electromechanics) Moscow, Voyen, izd-vo M-va obor. SSSR, 1958. 284p. No. of copies printed not given. 4p. Microfilm $1.80, Photocopy $1.80

BR-SOV/1992
Gendrikhovskiy, Zdislav Cheslavovich
GORNAYA ELEKTROTEKHNIKA (Electrical Engineering in Mining) Moscow, Ugletekhizdat, 1958. 323 p. Errata slip inserted. 25,000 copies printed. 5p. Microfilm $1.80, Photocopy $1.80

BR-SOV/1995
Netushil, Anatoliy Vladimirovich, Boris Yakovlevich Zhukhovitskiy, Vsevolod Nikolayevich Kudin, and Yevgeniy Pavlovich Parini
VYSOKOCHASTOTNYY NAGREV DIELEKTRIKOV I POLUPROVODNIKOV (High-frequency Heating of

Dielectric and Semiconductors) 2d ed., rev. Moscow, Gosenergoizdat; 1959. 479 p. Errata slip inserted. 11,000 copies printed. 4p. Microfilm $1.80, Photocopy $1.80

BR-SOV/1996
Nekrasov, Andrey Mikhaylovich
RAZVITIYE ENERGETIKI SSSR V 1959-1965 godakh (Development of Electric Power in the USSR from 1959 to 1965) Moscow, Izd-vo "Znaniye," 1959. 31 p. (Series: Vsesoyuznoye Obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy. Seriya IV, 1959, vyp. 8) 45,500 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/1999
Shevchik, Vladimir Nikolayevich
OSNOVY ELEKTRONIKI SVERKHVYSOKIKH CHASTOT (Principles of Superhigh Frequency Electronics) Moscow, Izd-vo "Sovetskoye radio," 1959. 306 p. Errata slip inserted. No. of copies printed not given. 4p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2000
Ditkin, Vitaliy Arsen'yevich and Anatoliy Platonovich Prudnikov
OPERATSIONNOYE ISCHISLENIYE PO DVUM PEREMENNYM I YEGO PRILOZHENIYA (Operational Calculus of Two Variables and Its Applications) Moscow, Fizmatgiz, 1958. 178 p. 8,000 copies printed. 3p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2002
Gurevich, Simon Borisovich
FIZICHESKIYE PROTSESSY V PEREDAYUSHCHIKH TELEVIZIONNYKH TRUBKAKH (Physical Processes in Television Camera Tubes) Moscow, Fizmatgiz, 1958. 300 p. 20,000 copies printed. (Series: Fiziko-matematicheskaya biblioteka inzhenera). 3p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2003
Moscow. Inzhenerno-fizicheskiy institut
LINEYNYYE USKORITELI; SBORNIK STATEY (Linear Accelerators; Collection of Articles) Moscow, 1959. 94 p. 1,000 copies printed. 3p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2005
Yermolayev, Konstantin Pavlovich, and Aleksey Zakharovich Babushkin
ELEKTROMAGNITNYYE I MAGNITNYYE PLITY METALLOREZHUSHCHIKH STANKOV; PROIZVODSTVO, EKSPLUATATSIYA I REMONT (Electromagnetic and Permanent-Magnetic Chucks for Machine Tools; Manufacture, Operation, and Repair) Moscow, Mashgiz, 1959. 106 p. Errata slip inserted. 4,000 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2007
Bogoroditskiy, Nikolay Petrovich, and Ilariy Dmitriyevich Fridberg
ELEKTROFIZICHESKIYE OSNOVY VYSOKOCHASTOTNOY KERAMIKI (Electrical and Physical Principles of High-Frequency Ceramics) Moscow, Gosenergoizdat, 1958. 191 p. 5,000 copies printed. 2 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2009
Litvakovskiy, Adol'f Abramovich
PLAVLENYYE LITYYE OGNEUPORY (Cast Fused Refractories) Moscow, Gosstroyizdat, 1959 308 p. Errata slip inserted. 3,500 copies printed. 3 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2010
Zholdak, Sergey Afanas'yevich, Yakov Yakovlevich Lychagin, and Vitaliy Semenovich Popov
TEKHNOLOGIYA IZGOTOVLENIYA ELEKTROELEMENTOV DLYA ELEKTROAVTOMATICHESKIKH USTROYSTV (Manufacturing Processes for Electric Elements of Automatic Electric Systems) Moscow, Oborongiz, 1959, 423 p. Errata slip inserted, 6,000 copies printed. 4 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2011
Sapozhnikov, Aleksandr Vladimirovich
KONSTRUIROVANIYE TRANSFORMATOROV (Design of Transformers) 2nd. ed., rev. Moscow, Gosenergoizdat, 1959. 360 p. 25,000 copies printed Errata slip inserted. 6 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2012
Brilakh, Mikhail Mikhaylovich
REGULIROVANIYE VAGRANOCHNOGO PROTSESSA (Control of Cupola Process) Moscow, Mashgiz, 1958. 106 p. Errata slip inserted. 6,000 copies printed. 3 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2016
D'yakonov, Vasiliy Fomich
MOREKHODNAYA ASTRONOMIYA (Nautical Astronomy) Leningrad, Izd-vo "Morskoy Transport, "1958. 462 p. 8,000 copies printed. Errata slip inserted. 7 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2018
Smirnov, Vladimir Ivanovich, Academician
KURS VYSSHEY MATEMATIKI, TOM 1 (A Course in Higher Mathematics, Vol 1) 18th ed., unrev. Moscow, Fizmatgiz, 1958. 478 p. 25,000 copies printed. 7 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2020
Vaysman, Khaim Gershevich
ELEKTRICHESKAYA APPARATURA UPRAVLENIYA SUDOVYMI ELEKTRODVIGATELYAMI (Electrical Equipment for Controlling Marine Electric Motors) Moscow, Izd-vo "Morskoy transport", 1958. 383 p. 7,000 copies printed. Errata slip inserted. 6 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2021(SOV/1715)
Grigor'yev, P.F.,
ISSLEDOVANIYE IZNOSA DETALEY AVIATSIONNOGO DVIGATELYA S POMOSHCH'YU RADIOAKTIVNYKH IZOTOPOV (Investigating Wear of Aircraft-engine Components by Means of Radioactive Isotopes) Moscow, AN SSSR, 1956. 12 p. 1 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2022
Gul'denbal'k, Vadim Vladimirovich
ORGANIZATSIYA I MEKHANIZATSIYA STROITEL'STVA LINIY ELEKTROPEREDACHI (Organization and Mechanization of Power Line Building) Moscow, Gosenergoizdat, 1958. 190 p. Errata slip inserted. 7,000 copies printed. 2 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2026
Udalov, Nikolay Petrovich
POLUPROVODNIKOVYYE TERMOUPRAVLYAYEMYYE SOPROTIVLENIYA (Thermistors) Moscow, Oborongiz, 1959. 89 p. (Series: Moscow. Aviatsionnyy institut imeni Sergo Ordzhonikidze. Trudy, vyp. 104) 11,650 copies printed. 2 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2029
Indenbaum, V.S., G. I. Mikhalin, and M.A. Sluchayev
MONTAZH ENERGETICHESKOGO OBORUDOVANIYA; KRATKOYE SPRAVOCHNOYE POSOBIYE (Installation of Power Equipment; a Concise Manual) Moscow, Mashgiz, 1959. 419 p. Errata slip inserted. 13,000 copies printed. 7 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2031
Lyustikh, Yevgeniy Nikolayevich
KRITIKA GEOTEKTONICHESKOY KONTRAKTSIONNOY GIPOTEZY (Criticism of the Geotectonic Contraction Hypothesis) Moscow, AN SSSR, 1958. 44 p. (Series: Akademiya nauk SSSR. Institut fiziki zemli. Trudy, No. 3 [170]) 2,000 copies printed. 2 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2033
Dubitskiy, Lev Grigor'yevich
RADIOTEKHNICHESKIYE METODY KONTROLYA IZDELIY (Electronic Inspection Methods of Products) Moscow, Mashgiz, 1958. 223 p. 8,000 copies printed. 3 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2035
Ufa. Aviatsionnyy institut
TRUDY, VYP. 2. (Transactions of the Ordzhonikidze Aviation Institute, Ufa) Nr. 2. Ufa, Bashkirskoye knizhnoye izd-vo, 1956. 219 p. Errata slip inserted. 1,000 copies printed. 4 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2037
Moscow. Vyssheye tekhnicheskoye uchilishche imeni N.E. Baumana
RASCHETY NA PROCHNOST' V MASHINOSTROYENII; [SBORNIK] Design for Strength in Mechanical Engineering; Collection of Articles) Moscow, Mashgiz, 1958. 244 p. (Series: Its: [Trudy] 89) 3,300 copies printed. 4 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2038
Krug, G. K.
RASCHET I PROYEKTIROVANIYE SLEDYASHCHIKH SISTEM (Calculation and Design of Servo Systems) Moscow, 1958. 174 p. 1,000 copies printed. 2 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2042
Suprunenko, Dmitriy Alekseyevich
RAZRESHIMYYE I NIL'POTENTNYYE LINENYYE GRUPPY (Solvable and Nilpotent Linear Groups) Minsk, Izd-vo Belgosuniv., 1958. 92 p. 2,000 copies printed. Errata slip inserted. 2 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2043
Moscow. Vyssheye tekhnicheskoye uchilishche imeni N. Ye. Baumana. Kafedra "Metallorezhushchie stanki i avtomaty"
VOPROSY AVTOMATOSTROYENIYA [SBORNIK] (Problems in the Construction of Automatic Machine Tools [Collection of Articles]) Moscow, Mashgiz, 1959. 213 p. 3,200 copies printed. 3 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2044
Zubtsov, Mikhail Yefimovich
LISTOVAYA SHTAMPOVKA (Sheet Stamping) Moscow, Mashgiz, 1958. 495 p. Errata slip inserted. 1,500 copies printed. 9 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2045
Ruditsyn, M. N., P. Ya. Artemov, and M. I. Lyuboshits
SPRAVOCHNOYE POSOBIYE PO SOPROTIVLENIYU MATERIALOV (Handbook on the Strength of Materials) Minsk, Gos. Izd-vo BSSR, 1958. 508 p. Errata slip inserted. 20,000 copies printed. 5 p. Microfilm $1.80 Photocopy $1.80

BR -SOV/2046
Teodorovich, Georgiy Ivanovich
AUTIGENNYYE MINERALY OSADOCHNYKH POROD (Authigenous Minerals of Sedimentary Rocks) Moscow, Izd-vo AN SSSR, 1958. 224 p. 2,000 copies printed. Errata slip inserted. 7 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2047
Gokhberg, Mikhail Mikhaylovich
METALLICHESKIYE KONSTRUKTSII KRANOV; RASCHET S UCHETOM YAYLENIY USTALOSTI (Metal Structures of Cranes; Design, Taking Fatigue Phenomena Into Consideration) Moscow, Mashgiz, 1959. 181 p. Errata slip inserted. 4,000 copies printed. 3 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2048
Sverdlovsk. Ural'skiy politekhnicheskiy institut imeni S.M. Kirova
TEORIYA I PRAKTIKA LITEYNOGO PROIZVODSTVA (Theory and Practice in the Foundry Industry) Moscow, Mashgiz, 1959. 231 p. and 32 p. (Series: Its: [Sbornik] vyp. 89) Errata slip inserted. 5,000 copies printed. 7 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2049
Davydov, Vladimir Ivanovich, and Mikhail Petrovich Maksakov
PROIZVODSTVO GNUTYKH TONKOSTENNYKH PROFILEY METODOM PROFILIROVANIYA NA ROLIKOVYKH STANKAKH (Manufacture of Bent Thin-walled Sections on Roll-forming Machines) 2d ed., rev. and enl. Moscow, Metallurgizdat, 1959. 232 p. 3,500 copies printed. 2 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2052
Krymskiy, Ivan Ivanovich
KUZNECHNO-SHTAMPOVOCHNOYE PROIZVODSTVO V SSSR (Forging and Stamping Industry in the USSR) Moscow, Izd-vo "Znaniye," 1959. 30p. (Series: Vsesoyuznoye obshchestvo po rasprostaneniyu politicheskikh i nauchnykh znaniy. Seriya IV, 1959, Nr.9) 43,000 copies printed 2 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2054
Kiselev, Vasiliy Stepanovich, and Lev Mikhaylovich Shcheglov
TOVARY SILIKATNYYE, IZ PLASTICHESKIKH MASS I KHIMIKO-MOSKATEL'NYYE (Silicate and Plastic Articles and Household Chemical Products) Moscow, Gostorgizdat, 1958. 320 p. Errata slip inserted. 10,000 copies printed. 5p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2055
Meyerzon, Frina Isaakovna
PUSK I NALADKA KISLORODNYKH USTANOVOK (Starting and Adjusting Oxygen Installations) Moscow, Metallurgizdat, 1959. 42 p. 3,500 copies printed. 2 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2056
Nitskevich, Z.A., V.T. Pirogova, and Ye. A. Levitas
PLASTICHESKIYE MASSY NA OSNOVE POLIAMIDNYKH SMOL; OBZOR OTECHESTVENNOY I ZARUBEZHNOY LITERATURY (Plastics From Polyamide Resins; Review of Domestic and Foreign Literature) Kiyev, 1958. 36 p. 2,000 copies printed. 2 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2057
Gamburtsev, Grigoriy Aleksandrovich
OSNOVY SEYSMORAZVEDKI (Principles of Seismic Prospecting) 2d ed. Moscow, Gostoptekhizdat, 1959. 377 p. 6,500 copies printed. Errata slip inserted. 8 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2058
Akademiya nauk SSSR. Kompleksnaya yuzhnaya geologicheskaya ekspeditsiya, 1952-1955
GEOLOGIYA I NEFTE-GAZONOSNOST' VOSTOCHNOGO PREDKAVKAZ'YA (Geology and Oil and Gas-bearing Possibilities of the Eastern Part of Predkavkaz'ye [Ciscaucasia]) Leningrad, Gostoptekhizdat, 1958. 621 p. (Series: Its: Trudy, vyp. 1) Errata slip inserted. 2,200 copies printed. 5 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2061
Baranenkov, G.S., Boris Pavlovich Demidovich, V.A. Yefimenko, S.M. Kogan, G.L. Lunts, Ye. F. Porshneva, Ye. P. Sycheva, S.V. Frolov, R. Ya. Shostak, and A. R. Yanpol'skiy
ZADACHI I UPRAZHNENIYA PO MATEMATICHESKOMU ANALIZU DLYA VTUZOV (Problems and Exercises in Mathematical Analysis for Vtuzes) Moscow, Fizmatgiz, 1959. 472 p. 40,000 copies printed. 5 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2063
Ovnatanov, Gurgen Tomasovich
VSKRYTIYE PLASTA I OSVOYENIYE SKVAZHIN (Opening the Productive Formation and Putting the Well Into Operation) Moscow, Gostoptekhizdat, 1959. 233 p. 2,750 copies printed. 2 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2066
Lyubvin, Vladimir Ivanovich
OBRABOTKA DETALEY ROTATSIONNYM OBZHATIYEM (Rotary-swaging of Machine Parts) Moscow, Mashgiz, 1959. 194 p. Errata slip inserted. 4,500

copies printed. 3 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2068
Kuperman, L. I.
LENINSKIYE IDEI ELEKTRIFIKATSII V DEYSTVII (Lenin's Ideas on Electrification Are Carried Out) Odessa, 1957. 113 p. No. of Copies printed not given. 2 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2069
Bagdasaryan, Andranik Bakhshiyevich
KLIMAT ARMYANSKOY SSR (Climate of Armenia) Yerevan, AN Armyanskoy SSR, 1958. 139 p. Errata slip inserted. 1,000 copies printed. 2 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2070
Taratynov, Vladislav Petrovich
ISPOL'ZOVANIYE RLS DLYA RASKHOZHDENIYA SUDOV (Use of RLS [Radar] for the Separation of Ships) Leningrad, Izd-vo "Morskoy transport," 1959. 67 p. Errata slip inserted 6,000 copies printed. 2 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2075
Akademiya nauk SSSR. Bashkirskiy filial, Ufa
KHIMIYA SERAORGANICHESKIKH SOYEDINENIY, SODERZHASHCHIKHSYA V NEFTYAKH I NEFTEPRODUKTAKH; [materialy III nauchnoy sessii] (Chemistry of Sulphur Organic Compounds Contained in Petroleum and Petroleum Products; [Papers of the Third Scientific Session]) Moscow, Izd-vo AN SSSR, 1959. 376 p. 2,000 copies printed. Errata slip inserted. 5 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2079
Bondarenko, S. T., B. Kh. Brodskaya, S. N. Lyrandres, E. A. Meyerovich
PRIMENENIYE ELEKTRICHESKOGO TOKA DLYA NEPOSREDSTVENNOGO VOZDEYSTVIYA NA PLAST TOPLIVA PRI BESSHAKHTNOY PODZEMMOY GAZIFIKATSII (Use of Electric Current for Direct Action on Solid Fuel Seams in Underground Gasification Without Sinking a Shaft) Moscow, AN SSSR, 1959. 234 p. 1,600 copies printed. Errata slip inserted. 5 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2081
International Conference on the Peaceful Uses of Atomic Energy, 2d., Geneva, 1958
DOKLADY SOVETSKIKH UCHENYKH; YADERNAYA FIZIKA (Reports of Soviet Scientists; Nuclear Physics) Moscow, Atomizdat, 1959. 552 p. (Series: Its: Trudy, Vol. 1) 8,000 copies printed. 7 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2082
ELEKTROIZOLYATSIONNYYE MATERIALY. CH. 1 SVOYSTVA MATERIALOV (Electrical Insulating Materials. Pt. 1: Properties of Materials) Moscow, Gosenergizdat, 1958. 460 p. (Series: Spravochnik po elektrotekhnicheskim materialam, t. 1) 30,000 copies printed. 8 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2084
ELEMENTY SISTEM AVTOMATICHESKOGO REGULIROVANIYA. CH. 2: KORREKTIRUYUSHCHIYE ELEMENTY I ELEMENTY VYCHISLITEL'NYKH MASHIN (Elements of Automatic Control Systems. Pt. 2: Compensating Elements and Components of Computing Machines) Moscow, Mashgiz, 1959. 453 p. (Series: Osnovy avtomaticheskogo regulirovaniya, t. 2) Errata slip inserted. 13,000 copies printed. 4 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2086
Tsypkin, Yakov Zalmanovich
TEORIYA IMPUL'SNYKH SISTEM (Theory of Pulse Systems) Moscow, Fizmatgiz, 1958. 724 p. 15,000 copies printed. 4 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2088
Sultanov, Azal' Dzhafarovich
LITOLOGIYA PRODUKTIVNOY TOLSHCHI APSHERONSKOGO POLUOSTROVA (Lithology of the Productive Series of the Apsheron Peninsula) Moscow Izd-vo AN SSSR, 1958. 140 p. (Series: Akademiya nauk SSSR. Sovet po izucheniyu proizvoditel'nykh sil. Azerbaydzhanskaya neftyanaye ekspeditsiya. Trudy, vyp. 2) Errata slip inserted. 1,300 copies printed. 2 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2090
Fotiadi, Eppominond Eppominondovich
GEOLOGICHESKOYE STROYENIYE RUSSKOY PLATFORMY PO DANNYM REGIONAL'NYKH GEOFIZICHESKIKH ISSLEDOVANIY I OPORNOGO BURENIYA (Geological Structure of the Russian Platform Based on Regional Geophysical Research and Geological Drilling) Moscow, Gostoptekhizdat, 1958, 243 p. (Series: Vsesoyuznyy nauchno-issledovatel'skiy institut geofizicheskikh metodov razvedki. Trudy, vyp. 4) 2,000 copies printed. 3 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2094
Akademiya nauk Kazakhskoy SSR. Institut metallurgii i obogashcheniya
TRUDY, T. 1 (Transactions of the Institute of Metallurgy and Ore Dressing, Kazakh SSR Academy of Sciences, Vol 1) Alma-Ata, Izd-vo AN Kazakhskoy SSR, 1959. 159 p. 1,225 copies printed. 3 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2098
Moscow, Vyssheye Tekhnicheskoye uchilishche imeni N. E. Baumana
NEKOTORYYE NOVYYE VOPROSY SHTAMPOVKI TOCHNYKH DETALEY; [Sbornik Statey] (Some New Problems in Stamping Precision Parts; Collection of Articles) Moscow, Oborongiz, 1959. 110 p. (Series: Its: [Trudy] 85) Errata slip inserted 4,700 copies printed. 3 p Microfilm $1.80 Photocopy $1.80

BR-SOV/2100
Musyakov, Leonid Abramovich, Girsh Solomonovich Vil'ner, and Anatoliy Vasil'yevich Yastrebov
AVTOMATIZATSIYA KAK SREDSTVO OZDOROVLENIYA USLOVIY TRUDA (Improved Working Conditions Through Automation) [Moscow] Profizdat, 1958. 71 p. 5,000 copies printed. 1 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2101
Adademiya nauk SSSR. Biblioteka
KHIMIYA V IZDANIYAKH AKADEMII NAUK SSSR. VYP. 3: 1936-1937 (Chemistry in Publications of the USSR Academy of Sciences. Nr 3: 1936-1937) Moscow, Izd-vo AN SSSR, 1958. 568 p. (Series: Khimicheskaya literatura SSSR, T. 1) Errata slip inserted. 2,200 copies printed. 2 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2103
Tsentral'nyy nauchno-issledovatel'skiy institut tekhnologii i mashinostroyeniya
STRUKTURA I SVOYSTVA ZHAROPROCHNYKH MATERIALOV; [Sbornik] (Structure and Properties of Heat-resisting Materials; Collection of Articles) Moscow, Mashgiz, 1959. (Series: Its: [Trudy] kn. 93) Errata slip inserted. 4,000 copies printed. 5 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2106
Solov'yev, Yuriy Ivanovich
ISTORIYA UCHENIYA O RASTVORAKH (History of the Theory of Solutions) Moscow, Izd-vo AN SSSR, 1959. 580 p. 2,500 copies printed. 2 p. Microfilm $1.80 Photocopy $ 1.80

BR-SOV/2107
Zamkovskiy, V. R., and V. Ye. Svets, Compilers
PODGOTOVKA METALLA K PROKATKE I OTDELKA PROKATA; OBOBSHCHENIYE PEREDOVOGO OPYTA (Preparing Metal for Rolling and Finishing Rolled Products; General Conclusions From Progressive Experiments) Khar'kov, Metallurgizdat, 1958. 279 p. 2,600 copies printed. 3 p. Microfilm $1.80 Photocopy $1.80

BR-BUL/2108
Angelov, G.,
MASHINNI ELEMENTI (Machine Elements) 2d ed., rev. and enl. Sofia, Nauka i izkustvo, 1957. 719 p. 4,062 copies printed. 6 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2110
Lakernik, Rafail Moiseyevich, and D. L. Sharle
POLIETILEN I YEGO PRIMENENIYE V KABEL'NOY TEKHNIKE (Polyethylene and Its Application in Cable Technology) Moscow, Gosenergoizdat, 1958. 142 p. 3,150 copies printed. 2 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2111
Komarovskiy, V. A.
GIDRAVLIKA, NASOSY, KOMPRESSORY, VENTILYATORY; KONSPEKTIVNOYE IZLOZHENIYE KURSA DLYA UCHASHCHIKHSYA VSESOYUZNOGO ZAOCHNOGO TEKHNIKUMA PISHCHEVOY PROMYSHLENNOSTI (Hydraulics, Pumps, Compressors, and Fans; course Outline for Students of the All-Union Correspondence Technical School of the Food Industry) Moscow, 1958. 91 p. 2,000 copies printed. 2 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2112
Tsentral'nyy institut prognozov
VOPROSY SEL'SKOKHOZYAYSTVENNOY METEOROLOGII (Problems in Agricultural Meteorology) Leningrad, Gidrometeoizdat, 1958. 121 p. (Series: Its: Trudy, vyp. 72) Errata slip inserted for vyp. 53, 1957. 1,200 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2113
Tsentral'nyy institut prognozov
VOPROSY MORSKIKH GIDROMETEOROLOGICHESKIKH PROGNOZOV (Problems of Marine Hydrometeorological Forcasting) Moscow, Gidrometeoizdat (Otd-niye). 1958. 88 p. Errata slip inserted (Series: Its: Trudy, vyp. 76) 1,000 copies printed. 2 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2114
Tsentral'nyy institut prognozov
VOPROSY SINOPTICHESKOY I DINAMICHESKOY METEOROLOGII (Problems of Synoptic and Dynamic Meteorology) Moscow, Gidrometeoizdat (Otd-niye), 1958. 110 p. (Series: Its: Trudy, vyp. 77). 1,100 copies printed. 2 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2115
Tsentral'nyy institut prognozov
VOPROSY DINAMICHESKOY METEOROLOGII (Problems of Dynamic Meteorology) Moscow, Gidrometeoizdat (Otd-niye), 1958. 110 p. (Series: Its: Trudy, vyp. 78) 1,300 copies printed. 2 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2116
Kirillov, Ivan Ivanovich,
GAZOVYYE TURBINY I GAZOTURBINNYYE USTANOVKI, TOM 2: GAZOTURBINNYYE USTANOVKI (Gas Turbines and Gas-Turbine Units, Vol 2: Gas-Turbine Units) Moscow, Mashgiz, 1956. 318 p. Errata slip inserted. 7,000 copies printed. 4 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2117
Soveshchaniye po eksperimental'noy tekhnike i metodam vysokotemperaturnykh issledovaniy, 1956
EKSPERIMENTAL'NAYA TEKHNIKA I METODY ISSLEDOVANIY PRI VYSOKIKH TEMPERATURAKH; TRUDY SOVESHCHANIYA (Experimental Techniques and Methods of Investigation at High Temperatures; Transactions of the Conference on Experimental Techniques and Methods of Investigation at High Temperatures) Moscow, AN SSSR, 1959. 789 p. (Series: Akademiya nauk SSSR. Institut metallurgii Komissiya po fizikokhimicheskim osnovam proizvodstva stali) 2,200 copies printed. 16 p. Microfilm $2.40 Photocopy $3.30

BR-SOV/2118
Gavrilov, A. N., P.I. Kovalev; B.A. Khokhlov; and N.F. Zherdev
AL'BOM PRISPOSOBLENIY DLYA METALLOREZHUSHCHIKH STANKOV, PRIMENYAYEMYKH V PRIBOROSTROYENII (Album of Fixtures for Metal-Cutting Tools Used in the Instrument-Making Industry) Moscow, Mashgiz, 1958. 166 p. 5,000 copies printed. 3 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2120
Avrov, Aleksey Nikolayevich
EKSPLUATATSIYA LAMPOVYKH GENERATOROV DLYA ELEKTROTERMII (Utilization of Vacuum-tube Generators in Electrothermy) Moscow, Gosenergoizdat, 1958. 165 p. 8,000 copies printed. 2 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2119
Buchenkov, Aleksey Nikolayevich
ATOMNAYA ENERGETIKA V SHESTOY PYATILETKE; REKOMENDATEL'NYY OBZOR LITERATURY. (Atomic Power Engineering in the Sixth Five-Year Plan; Review of Recommended Literature) Moscow, 1957. 18 p. (Series: Novosti tekhniki, vyp. 13) 17,000 copies printed. 1 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2121
Frank, Il'ya Mikhaylovich
IZLUCHENIYE VAVILOVA-CHERENKOVA; LEKTSIYA, PROCHITANNAYA NA VSEMIRNOY VYSTAVKE V BRYUSSELE... (Vavilov-Cherenkov Radiation; a Lecture Delivered at the Brussels' World Fair on August 13, 1958) Moscow, Izd-vo "Znaniy", 1959. 30 p. (Series: Vsesoyuznoye Obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy. Seriya IX, 1959, no. 8) 36,000 copies printed. 1 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2122
Yermilov, Petr Ivanovich
KHIMIYA V NARODNOM KHOZYAYSTVE SSSR (Chemistry in the National Economy of the USSR) Moscow, Izd-vo "Znaniy, "1959. 31 p. (Series: Vsesoyuznoye obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy. Seriya IV, 1959, no. 11) 47,500 copies printed. 2 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2123
Tarnavskiy, Abram L'vovich
EFFEKTIVNOST' VOLOCHENIYA S PROTIVONATYAZHENIYEM (Effectiveness of Back Pull [Reactive] Wire Drawing) Moscow, Metallurgizdat, 1959. 151 p. Errata slip inserted. 2,550 copies printed. 3 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2125
Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii. Institut Metallovedeniya i fiziki metallov
PROBLEMY METALLOVEDENIYA I FIZIKI METALLOV (Problems in Physical Metallurgy and Metallophysics) Moscow, Metallurgizdat, 1959. 540 p. (Series: Its: Sbornik Trudov, 6) Errata slip inserted. 3,600 copies printed. 9 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2128
Kreyter, V.M., V.V. Aristov, I.S. Volynskiy, A.N. Krestovnikov, and V.V. Kuvichinskiy
POVEDENIYE ZOLOTA V ZONE OKISLENIYA ZOLOTO-SUL'FIDNYKH MESTOROZHDENIY (Behavior of Gold in the Oxidation Zone of Gold-Sulfide Deposits) Moscow, Gosgeoltekhizdat, 1958. 266 p. 3,000 copies printed. 2 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2130
Melent'yev, L.A., and Ye. O. Shteyngauz
EKONOMIKA ENERGETIKI SSSR (Power Economics of the U.S.S.R.) Moscow, Gosenergoizdat, 1959. 395 p. Errata slip inserted. 4,600 copies printed. 6 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2131
Adademiya nauk SSSR. Morskoy gidrofizicheskiy institut
TERMIKA MORYA. KHIMIYA MORYA (Thermal Regime of the Sea. Chemistry of the Sea) Moscow, AN SSSR, 1958. 145 p. (Series: Its: Trudy, tom 13) Errata slip inserted. 1,300 copies printed. 2 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2132
Kiyev. Ukrainskiy Nauchno-issledovatel'skiy institut metallov

BR-SOV/2132
Kiyev. Ukrainskiy Nauchno-issledovatel'skiy institut metallov
TEKHNOLOGIYA PROIZVODSTVA I SVOYSTVA CHERNYKH METALLOV; SBORNIK (The Manufacture and Characteristics of Ferrous Metals; a collection of articles) Khar'kov, Khar'kovskiy gos. univ. im. A. M. Gor'kogo, 1958. 271 p. (Series: Its: Trudy, vyp. 4) Errata slip inserted. 1,000 copies printed. 3 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2133
Dolukhanova, Nina Ivanovna
OPYT PRIMENENIYA GIDROKHIMICHESKOY S" YEMKI NA MEDNO-MOLIBDENOVYKH MESTOROZHDENIYAKH ARMYANSKOY SSR (Case History of a Hydrochemical Survey of Copper and Molybdenum Deposits in the Armenian SSR) Yerevan, Izd-vo AN Armyanskoy SSR, 1958. 88 p. Errata slip inserted. 1,000 copies printed. 2 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2134
USSR. Glavnoye upravleniye po ispol'zovaniyu atomnoy energii
SPRAVOCHNIK PO DOZIMETRICHESKIM, RADIOMETRICHESKIM I ELEKTRONNOFIZICHESKIM PRIBORAM, SCHETCHIKAM, STSINTILLYATORAM I FOTOUMNOZHITELYAM (Handbook on Dosimetric, Radiometric, and Electronic Instruments; Meters, Scintillation Counters, and Photomultipliers) Moscow, Atomizdat, 1959. 252 p. Errata slip inserted. 25,000 copies printed. 8 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2135
Kaznacheyev, Yuriy Ivanovich
SHIROKOPOLOSNAYA DAL'NYAYA SVYAZ' PO VOLNOVODAM (Waveguide Broadband Long-distance Communication) Moscow, AN SSSR, 1959. (Series: Akademiya nauk SSSR. Nuachno-populyarnaya seriya) 10,000 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2136
Tsikerman, Leonid Yakovlevich
RASCHET PROTIVOKORROZIONNYKH IZOLIRUYUSHCHIKH OBOLOCHEK PODZEMNYKH METALLICHESKIKH TRUBOPROVODOV (Design of Anti-corrosive Insulating Coatings of Underground Metal Pipelines) Moscow, Izd-vo M-va kommun. khoz. RSFSR, 1958. 126 p. 2,600 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2137
Kamenomostskiy, Lev Samuilovich
SOVREMENNAYA AVIATSIONNAYA TEKHNIKA (Modern Aviation Technology) Moscow, Izd-vo "Znaniye," 1959. 31 p. (Series: Vsesoyuznoye obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy. Seriya IV, 1959 vyp. 10) 1p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2138
Dushin, Ivan Fedorovich
IZOLYATSIONNYYE KONSTRUKTSII KHOLODIL - NIKOV (Insulation Construction of Refrigerators) Moscow, Gostorgizdat, 1958. 46 p. (Series: Vsesoyuznyy nauchno-issledovatel'skiy institut kholodil'noy promyshlennosti. Nauchboye soobshcheniye) 2,000 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2139
Kozlov, Anatoliy L'vovich
O ZAKONOMERNOSTYAKH FORMIROVANIYA I RAZMESHCHENIYA NEFTYANYKH I GAZOVYKH ZALEZHEY (Formation and Distribution of Oil and Gas Deposits) Moscow, Gostoptekhizdat, 1959. 161 p. Errata slip inserted. 2,500 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2140
Kireyev, Valentin Aleksandrovich
KRATKIY KURS FIZICHESKOY KHIMII (A Short Course in Physical Chemistry) Moscow, Goskhimizdat, 1959. 599 p. Errata slip inserted. 25,000 copies printed. 9p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2145
RASCHET OSNOVNYKH PARAMETROV TIPOVYKH AVTOMATICHESKIKH ZAGRUZOCHNYKH USTROYSTV, VYP. 1: (I KLASSIFIKATSIYA AVTOMATICHESKIKH ZAGRUZOCHNYKH PRISPOSOBLENIY, II TERMINOLOGIYA) (Design of Basic Parameters for Automatic Loading Devices, Nr 1:) (I Classification of Automatic Loading Devices, II Terminology) Moscow, Tsentr. byuro tekhn. inform., 1958. 39 p. 2,000 copies printed. 1p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2146
Leningrad. Universitet
MATERIALY PO MASHINNOMU PEREVODU; SBORNIK 1 (Materials on Machine Translation; Collection of Articles Nr. 1) Leningrad, Izd-vo Leningr. univ., 1958. 228 p. 1,000 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2147
Kroshkin, Mikhail Galaktionovich
SPUTNIK SOLNTSA (Artificial Sun Satellite) Moscow, Izd-vo "Znaniye," 1959. 31 p. (Series: Vsesoyuznoye obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy. Seriya IX, 1959, vyp. 6) 40,000 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2148
Arbuzov, Boris Aleksandrovich
FOSFORORGANICHESKIYE SOYEDINENIYA (Organic Phosphorus Compounds) Moscow, Izd-vo "Znaniye," 1959. 15 p. (Series: Vsesoyuznoye

obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy. Seriya IX, 1959, vyp. 5) 37,000 copies printed. 1p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2149
Andrianov, Kuz'ma Andrianovich
SINTETICHESKIYE VYSOKOPOLIMERY V ELEKTROENERGETIKE (Synthetic High Polymers in Electric Power Engineering) Moscow, Izd-vo "Znaniye," 1959. 30 p. (Series: Vsesoyuznoye obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy. Seriya IX, vyp. 4) 36,000 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2150
Petrov, Petr Sergeyevich
PEREDOVOY PROIZVODSTVENNYY OPYT V PROMYSHLENNOSTI I OSNOVNYYE FORMY YEGO VNEDRENIYA (Progressive Production Methods in Industry and the Principal Forms of Their Application) Moscow, Izd-vo "Znaniye," 1959. 45 p. (Series: Vsesoyuznoye obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy. Seriya III, 1959, vyp. 13) 54,000 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2151
Naumov, Adol'f L'vovich
TEORETICHESKAYA MEKHANIKA, CH. 2: MEKHANIKA NESVOBODNOY SISTEMY. ABSOLYUTNO TVERDOYE TELO (Theoretical Mechanics; Part 2: Mechanics of a Constrained System. Ideal Rigid Body) [Kiyev] Izd-vo Kiyevskogo gos. univ., 1958. 316 p. 5,000 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2152
Moscow. Institut inzhenerov geodezii, aerofotos"yemki i kartografii
TRUDY, VYP. 33 (Transactions of the Moscow Institute of Engineering Geodesy, Aerial Photography, and Cartography, Nr 33) Moscow, Geodezizdat, 1958. 123 p. 1,000 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2153
Akademiya nauk SSSR. Kompleksnaya antarkticheskaya ekspeditsiya
AEROLOGICHESKIYE I METEOROLOGICHESKIYE ISSLEDOVANIYA; DIZEL'-ELEKTROKHOD "OB'," 1955-1956 gg (Aerological and Meteorological Studies; Research Ship "Ob" 1955-1956) Leningrad, Gidrometeoizdat, 1958. 180 p. (Series: Its: Trudy) Errata slip inserted. 2,000 copies printed. 21. Microfilm $1.80 Photocopy $1.80

BR-SOV/2154
Akademiya nauk SSSR. Vostochno-Sibirskiy filial
SYR'YEVYYE RESURSY LEGKIKH METALLOV VOSTOCHNOY SIBIRI, TOM. 2 (Light Metal Resources of Eastern Siberia, Vol 2) Moscow, 1958. 298 p. (Series: Its: Trudy, vyp. 13) 1,200 copies printed. 4p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2155
Petrochenko, Vladislav Fedorovich
IZMERITEL' MAGNITNOY PRONITSAYEMOSTII (Permeameter) Moscow, 1958. 8 p. (Series: Peredovoy nauchno-tekhnicheskiy i proizvodstvennyy opyt. Tema 35, no. P-58-73/11) 1,800 copies printed. 1p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2156
Soveshchaniye po kompleksnoy mekhanizatsii i avtomatizatsii tekhnologicheskikh protsessov. 2nd, 1956.
AVTOMATIZATSIYA MASHINOSTROITEL'NYKH PROTSESSOV; /TRUDY SOVESHCHANIYA/, TOM. 1: GORYACHAYA OBRABOTKA METALLOV (Automation of Machine-Building Processes; Proceedings of the Conference on Over-All Mechanization and Automation of Technological Process, Vol 1: Hot Metal-Forming) Moscow, 1959. 394 p. 5,000 copies printed. 4p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2157
Iskenderov, Mamed Abdul -ogly
RAZRABOTKA NEFTYANYKH MESTOROZHDENIY (Development of a Petroliferous Area) Moscow, Gostoptekhizdat, 1959. 151 p. 2,500 copies printed. 3p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2158
Khrushchov, Mikhail Mikhaylovich, and Yefim Solomonovich Berkovich
OPREDELENIYE IZNOSA DETALEY MASHIN ISKUSSTVENNYKH BAZ (Determining Wear of Machine Parts by the Indentation Method) Moscow, 1959. 217 p. Errata slip inserted. 2,500 copies printed. 5p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2159
Patskevich, Ivan Romanovich
VIBRODUGOVAYA NAPLAVKA (Surfacing by Vibro-arc Welding) Moscow, Mashgiz, 1958. 118 p. Errata slip inserted. 6,500 copies printed. 3p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2160
Kunakov, Nikolay Yevgen'yevich
RAZVITIYE GAZOVOGO KHOZYAYSTVA METALLURGICHESKIKH ZAVODOV (Developing the

Supply and Utilization of Gas in Metallurgical Plants) Moscow, Metallurgizdat, 1959. 210 p. Errata slip inserted. 3,000 copies printed. 4p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2161
Bannyy, Nikolay Pavlovich
EFFEKTIVNOST' PRIMENENIYA KISLORODA V MARTENOVSKOM PROIZVODSTVE (Effectiveness of Using Oxygen in Open-hearth Processes) Moscow, Metallurgizdat, 1959. 165 p. Errata slip inserted. 5,000 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2162
Akademiya nauk SSSR. Energeticheskiy institut.
FIZICHESKAYA GAZODINAMIKA (Physical Gas Dynamics) Moscow, 1959. 167 p. 3,000 copies printed. 6p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2163
Serpionov, Nikolay Nikolayevich
KURS LEKTSIY PO SOPROTIVLENIYU MATERIALOV; DLYA STUDENTOV TEKHNOLOGICHESKOGO FAKUL'TETA (Course of Lectures on the Resistance of Materials; for Engineering Students) Moscow, 1958. 184 p. 1,000 copies printed. 5p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2165
Akademiya stroitel'stva i arkhitektury SSSR. Institut stroitel'nykh konstruktsiy
ISSLEDOVANIYA PO VOPROSAM TEORII PLASTICHNOSTI I PROCHNOSTI STROITEL'NYKH KONSTRUKTSIY; SBORNIK STATEY (Investigating of Problems in the Theory of Plasticity and Strength of Engineering Structures; Collection of Articles) Moscow, Gosstroyizdat, 1958. 211 p. 2,500 copies printed. 3p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2167
Shostak, Afanasiy Grigor'yevich
RAZRABOTKA ZHELEZORUDNYKH ZALEZHEY V KRIVOROZHSKOM BASSEYNE (Developing Iron Ore Deposits in the Krivoy Rog Basin) Moscow, Metallurgizdat, 1959. 534 p. Errata slip inserted. 1,800 copies printed. 5p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2168
Gavrilov, Valentin Aleksandrovich
PROZRACHNOST' ATMOSFERY I VIDIMOST' (Atmospheric Transparency and Visibility) 2nd ed., rev. and enl. Leningrad, Gidrometeoizdat, 1958. 166 p. 8,000 copies printed. 3p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2169
Frank-Kamentskiy, David Al'bertovich
OBRAZOVANIYE KHIMICHESKIKH ELEMENTOV V NEDRAKH ZVEZD (Formation of Chemical Elements Inside Stars) Moscow, Izd-vo "Znaniye", 1959. 30 p. (Series: Vsesoyuznoye obshchestvo po rasprostrnaeniyu politicheskikh i nauchnykh znaniy. Seriya IX, 1959, no. 10) 36,000 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2170
Akademiya nauk Ukrainskoy SSR. Institut metallokermiki i spetsial'nykh splavov
VOPROSY POROSHKOVOY METALLURGII I PROCHNOSTI MATERIALOV, VYP. 5 (Problems in Powder Metallurgy and Strength of Materials, Nr 5) Kiyev, Izd-vo AN USSR, 1958. 172 p. 2,000 copies printed. 3p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2171
Omarovskiy, Aleksandr Grigor'yevich
MASHINOSTROYENIYE V 1959-1965 GODAKH; RAZVITIYE MASHINOSTROITEL'NOY PROMYSHLENNOSTI SSSR PO SEMILETNEMU PLANU (Machine Manufacturing During 1959-1965; Development of the Machine-Manufacturing Industry in the USSR in the Seven Year Plan) Moscow, Izd-vo "Znaniye," 1959. 31 p. (Series: Vsesoyuznoye obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy. Seriya III, 1959, vyp. 14) 57,000 copies printed. 1p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2172
Akademiya nauk SSSR. Mezhduvedomstvennaya postoyannaya komissiya po zhelezu
ZHELEZORUDNYYE MESTOROZHDENIYA ALTAYE-SAYANSKOY GORNOY OBLASTI, TOM. 1, KNIGA. 1: GEOLOGIYA (Iron Ore Deposits of the Altay-Sayan Mountain Region, Vol 1, Book 1: Geology) Moscow, 1958. 330 p. (Series: Zhelezorudnyye mestorozhdeniya SSSR) Errata slip inserted. 2,500 copies printed. 5p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2174
Oglobin, Nikolay Dmitriyevich, and Igor' Viktorovich Trushlevich
TEKHNICHESKIY KONTROL' NA UGLEOBOGATITEL'NYKH FABRIKAKH (Technical Control in Coal Preparation Plants) Moscow, Ugletekhizdat, 1959. 210 p. Errata slip inserted. 4,000 copies printed. 4p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2176
Lubochkin, Boris Iosifovich
MORSKIYE PAROVYYE KOTLY (Marine Steam Boilers) Moscow, Izd-vo "Morskoy transport," 1958. 519 p. Errata slip inserted. 5,500 copies printed. 4p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2177
Grinkevich, Petr Stepanovish
STROITEL'NYYE MASHINY (Construction Machinery) Moscow, Gosstroyizdat, 1959. 495 p. Errata slip inserted. 10,000 copies printed. 6p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2178
Kudryavtsev, Boris Borisovich
O NESLYSHIMYKH ZVUKAKH (Inaudible Sounds) 2nd ed., enl., Moscow, Voyenizdat, 143 p. (Series: Nauchno-populyarnaya biblioteka) No. of copies printed not given. 3p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2179
Gel'tman, Aleksey Eduardovich, Andrey Andreyevich Kanayev, and Rudol'f Vul'fovich Tsukerman
TEPLOENERGOMASHINOSTROYENIYE V SHESTOY PYATILETKE (Heat Power Machinery Manufacture in the Sixth Five Year Plan) Leningrad, 1958. 49 p. Errata slip inserted. 9,000 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2180
Lange, Oktariy Konstantinvich
OBSHCHAYA GEOLOGIYA (General Geology) Moscow, Gosgeoltekhizdat, 1958. 250 p. Errata slip inserted. 10,000 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2181
Vrashev, Sergey Pavlovich, Aleksandr L'vovich Letnik, and Daniil Moiseyevich Shifrin
MASHINOVEDENIYE (Science of Mechanical Engineering) Moscow, Mashgiz, 1956. 463 p. 80,001-155,000 copies printed. 9p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2184
Lobanova, Inna Nikolayevna
POLUPROVODNIKOVYYE DIODY I TRIODY (Semiconductor Diodes and Triodes) Moscow, Izd-vo DOSAAF, 1958. 92 p. 50,000 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2186
Yanko-Trinitskiy, Aleksandr Aleksandrovich
NOVYY METOD ANALIZA RABOTY SINKHRONNYKH DVIGATELEY PRI REZKOPEREMENNYKH NAGRUZKAKH (New Method for Performance Analysis of Synchronous Motors During Sudden Changes in Load) Moscow, Gosenergoizdat, 1958. 102 p. Errata slip inserted. 5,000 copies printed. 4p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2188
Akademiya nauk SSSR. Institut nauchnoy i tekhnicheskoy informatsii, Filial.
AVTOMATICHESKIY PODATCHIK SIGNALOV TREVOGI I BEDSTVIYA. MALORELEYNYY RASPREDELITEL IMPUL'SOV (Automatic Trans-Mitter of Alarm and S.O.S. Signals. Pulse Distributor With Small Number of Relays) Moscow, 1958. 14 p. (Series: Peredovoy nauchno-tekhnicheskiy i proizvodstvennyy opyt. Tema 42, no. P-58-45/3) 1,730 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2191
Kolodtsev, Kh. I., and B. D. Katsnel'son
ISPOL'ZOVANIYE TVERDOGO TOPLIVA V GAZOTURBINNYKH USTANOVKAKH (Use of Solid Fuel in Gas-Turbines) Moscow, 1958. 85 p. (Series: Energeticheskaya promyshlennost') Errata slip inserted. 3,000 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2192
Pridantsev, Mikhail Vasil'yevich, and Kseniya Alekseyevna Lanskaya
STALI DLYA KOTLOSTROYENIYA (Steels for the Manufacture of Boilers) Moscow, Metallurgizdat, 1959. 303 p. 4,500 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2193
Sovetskaya antarkticheskaya ekspeditsiya, 1955-1958
INFORMATSIONNYY BYULLETEN', VYP. 3 (Information Bulletin of the Soviet Antarctic Expedition, Nr 3) Leningrad, Izd-vo "Morskoy transport," 1958. 102 p. 1,500 copies printed. 4p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2195
Andrianov, Kuz'ma Andrianovich, and Aleksey Ivanovich Petrashko
KREMNIYORGANICHESKIYE POLIMERY V NARODNOM KHOZYAYSTVE (Organosilicon Polymers in the National Economy) Moscow, Izd-vo AN SSSR, 1959. 76 p. (Series: Akademiya nauk SSSR. Nauchno-populyarnaya seriya) 15,000 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2196
Bodnikevich, S. I.
IZ OPYTA ELEKTROSNABZHENIYA STROITEL'-STVA STALINGRADSKOY GES (Supplying Electric Power to the Construction Site of the Stalingrad Hydro-electric Power Station) Kuybyshev, Orgenergostroy, 1958. 12 p. 2,000 copies printed. 1p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2197
Konyukhov, I. A.
OPYT IZUCHENIYA MEZOZOYSKIKH OTLOZHENIY VOSTOCHNOGO PREDKAVKAZ'YA; V SVYAZI S PERSPEKTIVAMI NEFTEGAZONOSNOSTI

(Study of Mesozoic Deposits in Eastern Ciscaucasia; Oil- and Gas-bearing Possibilities) Moscow, Gosinti, 1958. 125 p. Errata slip inserted. 1,550 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2199
Gorin, Boris Shmerelevich
INDIKATORY DAL'NOSTI (Range Indicators) Moscow, Voyenizdat, 1957. 85 p. (Series: Radiolokatsionnaya tekhnika) No. of copies printed not given. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2203
Gostev, Boris Ivanovich, and Yuriy Yakovlevich Zil'berg
ALYUMINIYEVYY SPLAV ASM DLYA TYAZHELONAGRUZHENNYKH PODSHIPNIKOV (Aluminum Alloy, ASM, for Heavily Loaded Bearings) Moscow, Mashgiz, 1959. 181 p. 4,000 copies printed. 3p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2205
Vsesoyuznyy nauchno-issledovatel'skiy institut fiziko-tekhnicheskikh i radiotekhnicheskik izmereniy
IZMERENIYE VREMENI; SBORNIK (Measurement of Time; Collection of Articles) Moscow, Standartgiz, 1958. 115 p. (Series: Its: Trudy, /vyp/ 1) Errata slip inserted. 2,000 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2206
Romantsev, Yevgeniy Fedorovich, and Aleksey Vladimirovich Savich
KHIMICHESKAYA ZASHCHITA OT DEYSTVIYA IONIZIRUYUSHCHEY RADIATSII (Chemical Protection From Effects of Ionizing Radiation) Moscow, Medgiz, 1958. 142 p. Errata slip inserted. 6,000 copies printed. 3p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2207
Leningrad. Institut kinoinzhenerov. Kafedra akustiki
RUKOVODSTVO K LABORATORNYM RABOTAM PO KURSU "IZMERENIYA PRI ZVUKOVYKH CHASTOTAKH" (Laboratory Manual for the Course on "Measurements at Audio Frequencies") Leningrad, 1957. 46 p. 400 copies printed. 1p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2209
Kurlyandskiy, Sergey Davidovich
RADIOLOKATSIYA I YEYE VOYENNOYE PRIMENENIYE (Radar and Its Military Application) Moscow, Izd-vo DOSAAF, 1959. 44 p. Errata slip inserted. 15,000 copies printed. 1p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2210
ATOMNAYA ENERGIYA V AVIATSII I RAKETNOY TEKHNIKE; SBORNIK STATEY (Atomic Energy in Aviation and Rocket Engineering; Collection of Articles) Moscow, Voyen. Izd-vo M-va obor. SSSR, 1959. 500 p. (Series: Nauchno-populyarnaya biblioteka) No. of copies printed not given. 5p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2213
Groznyy. Neftyanoy nauchno-issledovatel'skiy institut
KHIMIYA I TEKHNOLOGIYA PERERABOTKI NEFTI I GAZA (Chemistry and Technology of Petroleum and Gas Refining Processes) Moscow, Gostoptekhizdat, 1959. 278 p. (Series: Its: Trudy, vyp. 4) 2,500 copies printed. 5p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2214
Deych, Mikhail Yefimovich, and Georgiy Semenovich Samoylovich
OSNOVY AERODINAMIKI OSEVYKH TURBOMASHIN (Fundamentals of the Aerodynamics of Axial-flow Turbomachinery) Moscow, Mashgiz, 1959. 427 p. Errata slip inserted. 3,500 copies printed. 5p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2219
RSFSR. Glavnoye upravleniye geologii i okhrany nedr
GEOLOGIYA I NEFTEGAZONOSNOST' VOSTOCHNOY SIBIRI (Geology and Oil- and Gas-bearing Possibilities of Eastern Siberia) Moscow, Gostoptekhizdat, 1959. 486 p. 1,650 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2220
Pogosyan, Khoren Petrovich
OBSHCHAYA TSIRKULYATSIYA ATMOSFERY (General Circulation of the Atmosphere) Leningrad, Gidrometeoizdat, 1959. 259 p. 2,000 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2223
Konferentsiya po voprosam rascheta, konstruirovaniya i issledovaniy zubchatykh peredach i peredach gibkoy svyaz'yu. Odessa, 1957
RASCHET KONSTRUIROVANIYE I ISSLEDOVANIYE PEREDACH; TRUDY, KONFERENTSII, [TOM] 2 (Design, Construction, and Analysis of Transmissions; Transactions of a Conference on Problems in Design, Construction, and Analysis of Gears and Flexible Transmissions, Vol 2) [Odessa] Odesskiy politekhn. in-t, 1958. 94 p. 3,000 copies printed. 3p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2227
Vsesoyuznyy nauchno-issledovatel'skiy institut avtogennoy obrabotki metallov
PROIZVODSTVO ATSETILENA DLYA GAZOPLAMENNOY OBRABOTKI METALLOV (Production of Acetylene for Flamespraying Metals) Moscow, Mashgiz, 1958. 87 p. (Series: Spravochnyye materialy po gazoplamennoy obrabotke metallov, vyp. 14) Errata slip inserted. 7,000 copies printed. 3p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2229
Chernomorskiy, Yakov L'vovich
REAKTIVNAYA TEKHNIKA (Jet Propulsion Engineering) [Irkutsk] Irkutskoye knizhnoye izd-vo, 1957. 59 p. (Series: Nauchno-populyarnaya biblioteka) 3,000 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2233
Belavin, Oleg Vasil'yevich, Viktor Abramovich Veytsel', and Vasiliy Ul'yanov
KOROTKOVOLNOVYYE RADIOPELENGATROY (Short-Wave Radio Direction Finders) Moscow, Oborongiz, 1959. 123 p. (Series: Moscow. Aviatsionnyyeinstitut imeni Sergo Ordzhonikidze) 11,500 copies printed. 3p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2243
Zhilinskiy, German Borisovich
OLOVONOSNOST' TSENTRAL'NOGO KAZAKHSTANA; OLOVONOSNYYE FORMATSII I IKH MESTO V OBSHCHEY METALLOGENII REGIONA (Tin-bearing Possibilities of Central Kazakhstan; Tin-bearing Formations and Their Position in the General Regional Metallogeny) Alma-Ata, Izd-vo AN Kazakhskoy SSR, 1959. 209 p. Errata slip inserted. 1,000 copies printed. 4p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2244
Shumikhin, Yuriy Artem'yevich
TELEVIDENIYE V VOYENNOM DELE (Television in Military Operations) Moscow, Voyen. izd-vo M-va obor. SSSR, 1958. 79 p. No. of copies printed not given. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2249
Glavnaya geofizicheskaya observatoriya
VOPROSY RAZRABOTKI METEOROLOGICHESKIKH PRIBOROV (Problems in the Development of Meteorological Instruments) Leningrad, Gidrometeoizdat, 1958. 48 p. (Series: Its: Trudy, vyp. 83). 1,350 copies printed. 1p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2251
Korzh, Mikhail Vasil'yevich
PETROGRAFIYA TRIASOVYKH OTLOZHENIY YUZHNOGO PRIMOR'YA I PALEOGEOGRAFIYA VREMENI IKH OBRAZOVANIYA (Petrography of the Triassic Formations of South Primor'ye and the Paleogeography at the Time of Their Development) Moscow, Izd-vo AN SSSR, 1959. 82 p. Errata slip inserted. 1,500 copies printed. 1p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2253
Vsesoyuznyy nauchno-issledovatel'skiy institut prirodnykh gazov
RAZRABOTKA I EKSPLUATATSIYA GAZOVYKH MESTOROZHDENIY, TRANSPORT GAZA (Development and Exploitation of Gas Fields, Transportation of Gas) Moscow, Gostoptekhizdat, 1959, 353 p. (Series: Its: Trudy, vyp. 5/13/) Errata slip inserted. 1,500 copies printed. 3p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2256
Vsesoyuznyy nauchno-issledovatel'skiy institut geofizicheskikh metodov razvedki
PRIKLADNAYA GEOFIZIKA; SBORNIK STATEY, VYP. 22 (Applied Geophysics; Collection of Articles, Nr 22) Moscow, Gostoptekhizdat, 1959. 217 p. 3,000 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2264
USSR. Glavnoye upravleniye geodezii i kartografii
TABLITSY DLYA VYCHISLENIYA PLOSKIKH KONFORMNYKH KOORDINAT GAUSSA V PREDELAKH SHIROT OT 30^{o} do 80^{o}; ELLIPSOID KRASOVSKOGO (Tables for Computation of Plane Conforming Gauss Coordinates in the 30^{o} to 80^{o} Latitude Range; Krasovskiy Ellipsoid) Moscow, Geodezizdat, 1958. 119 p. Errata slip inserted. 6,000 copies printed. 1p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2266
Tsentral'nyy nauchno-issledovatel'skiy institut geodezii, aeros"yemki i kartografii.
ISSLEDOVANIYA PO KARTOGRAFII (Studies in Cartography) [Moscow] Geodezizdat, 1958. 34 p. (Series: Its: Trudy, vyp. 126) Errata slip inserted. 1,500 copies printed. 1p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2269
Glavnaya geofizicheskaya observatoriya
VOPROSY KLIMATOGRAFFI (Problems of Climatography) Leningrad, Gidrometeoizdat, 1958. 134 p. (Series: Its: Trudy, vyp. 85) Errata slip inserted. 1,100 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2270
Glavnaya geofizicheskaya Observatoriya
VOPROSY SINOPTICHESKOY KLIMATOLOGII

(Problems in Synoptic Climatology) Leningrad, Gidrometeoizdat, 1959. 105 p. (Series: Its: Trudy, vyp. 87) 1,100 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2284
Moscow. Vsesoyuznyy nauchno-issledovatel'skiy geologo-razvedochnyy neftyanoy institut
PERSPEKTIVY NEFTE-GAZONOSNOSTI I NAPRAVLENIYE GEOLOGORAZVEDOCHNYKH RABOT V SEVERO-VOSTOCHNYKH RAYONAKH URALO-VOLZHSKOY NEFTENOSNOY OBLASTI; VYYEZDNAYA SESSIYA UCHENOGO SOVETA VNIGNI, DEKABR' 1956 G., KAZAN' (Oil- and Gas-bearing Possibilities and the Direction of Geological Exploration in the Northeastern regions of the Volga-Ural Petroliferous Region. Session of the Scientific Council of the All-Union Petroleum Scientific Research Institute for Geological Exploration Held at Kazan; December 1956) Moscow, Gostoptekhizdat, 1958. 257 p. Errata slip inserted. 1,000 copies printed. 4p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2305
Chelyabinsk. Politekhnicheskiy institut
VOPROSY TEORII I PRAKTIKI OBRABOTKI METALLOV DAVLENIYEM (Problems in the Theory and Practice of Metal Forming) Moscow, Mashgiz, 1959. 103 p. (Series: Its: [Sbornik] vyp. 14) Errata slip inserted. 5,000 copies printed. 3p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2307
Bogdanov, Aleksandr Pavlovich, Rostislav Ivanovich Vinogradov, and Konstantin Dmitriyevich Mirtov
SBORNIK ZADACH PO KONSTRUKTSII I PROCHNOSTI SAMOLETOV (Collection of Problems on Aircraft Construction and Strength) Moscow, Oborongiz, 1959. 230 p. Errata slip inserted. 7,000 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2334
Akademiya nauk SSSR. Dal'nevostochnyy filial, Vladivostok
SBORNIK MATERIALOV PO VOPROSAM SEZONNOY MERZLOTY (Collection of Papers on Problems of Seasonally Frozen Ground) Vladivostok, 1957. 70 p. 800 copies printed. 2p. Microfilm $1.80, Photocopy $1.80

BR-SOV/2355
Moscow. Universitet. Geograficheskiy fakul'tet
INFORMATSIONNYY SBORNIK O RABOTAKH GEOGRAFICHESKOGO FAKUL'TETA MOSKOVSKOGO GOSUDARSTVENNOGO UNIVERSITETA PO MEZHDUNARODNOMU GEOFIZICHESKOMU GODU, No. 1 (Collection of Information on Work Done by the Geography Department of Moscow University for the International Geophysical Year, Nr. 1) Moscow, 1958. 298 p. Errata slip inserted, 800 copies printed. 3p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2381
Kovarskiy, Mikhail Savel'yevich
OPLATA TRUDA NA PREDPRIYATIYAKH CHERNOY METALLURGII (Wages in Ferrous Metallurgy Plants) [Moscow] Profizdat, 1958. 94 p. 2,200 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2384
Konferentsiya po agrometeorologii i agroklimatologii Ukrainskoy SSR
MATERIALY KONFERENTSII (Material of the Conference on Agricultural Meteorology and Climatology of the Ukrainian SSR) Leningrad, Gidrometeoizdat, 1958. 247 p. Errata slip inserted. 700 copies printed. 4p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2388
Tomaszkiewicz, Leon
WIEK NAFTY (The Petroleum Age) Warsaw, PWN, 1956. 264 p. (Series: Biblioteka problemow) 5,159 copies printed. 2p. Micorfilm $1.80 Photocopy $1.80

BR-SOV/2422
Akademiya nauk Kirgizskoy SSR. Otdel geografii. Tyan'-Shanskaya fiziko-geograficheskaya stantsiya
RABOTY, /VYP/ 1. GLYATSIOLOGIYA (Works of the Tyan'-Shan' Physical Geography Station of the Geography Division, Kirghiz SSR Academy of Sciences, Nr. 1. Glaciology) Frunze, 1958. 91 p. Errata slip inserted. 500 copies printed. 1p. Microfilm $1.80, Photocopy $1.80

BR-GER/2438
EMG. ELEKTRONISCHE MESSGERATE (Electronic Measuring Instruments) Budapest [1958?] (Unpaged) No. of copies printed not given. 2p. Microfilm $1.80, Photocopy $1.80

BR-CZECH/2447
Ceskoslovenska Akademie Ved. Geofysikalni Ustav
GEOFYSIKALNI SBORNIK 1957. GEOFIZICHESKIY SBORNIK. TRAVAUX GEOPHYSIQUES. (Geophysical Symposium, 1957) Praha, Nakl. CAV, 1958. 631 p. (Series: Its: Trudy, No. 61-71) 700 copies printed. 3p. Microfilm $1.80, Photocopy $1.80

TRANSLATIONS IN PROCESS

THE AMAZING TU-114.
Pravda (USSR) 1959, no. 188, p. 3.

AVIATION SPORTSMEN OVER MOSCOW.
Krasnaya Zvesda (USSR) 1959, 2 June, p. 4.

FIRST IN THE HISTORY OF AVIATION.
Grazhdanskaya Aviatsiya (USSR) 1959, no. 6, p. 2.

THE FIRST YEAR.
Izvestiya (USSR) 1959, no. 165, p. 4.

FROM THE MODEL TO SUPERSONIC SPEEDS.
Kridla Vlasti (Czechoslavakia) 1959, no. 10, p. 11.

HINDUSTAN PUSHPACK: INDIA.
Skrzydlata Polska, 1959, no. 17, p. 13.

HISTORY OF THE DEVELOPMENT OF THE JAK-18 AIRCRAFT.
Skrzydlata Polska, 1959 [v. 15] no. 6, appendix, p. 1-2.

NEWS ITEMS FROM THE WORLD OF AERONAUTICS.
Deutsche Flugtechnik (Germany) 1959, no. 3, p. 96.

ON THE FIRST INTERNATIONAL CONGRESS ON AUTOMATIC CONTROL TO BE HELD IN MOSCOW.
Avtomatyka (USSR) 1959, no. 1, p. 94.

THE RUMANIANS ARE LEARNING TO FLY HELICOPTERS.
Skrzydlata Polska, 1959 [v. 15] no. 24, appendix, p. 1.

SPECIALIST'S CONVENTION "METAL FORMING TECHNIQUES" 1959.
Deutsche Flugtechnik (Germany) 1959, no. 3, p. 74.

TO RAISE THE STANDARD OF EDUCATIONAL WORK IN ACADEMIES.
Sovetskaya Aviatisya (USSR) 1957, no. 83, p. 1.

THE YAK-24 HELICOPTER IN CONSTRUCTION.
Trud (USSR) 1959, no. 139, p. 3.

Andriyevskiy, R. O.
COMPARATIVE INVESTIGATION OF VARIOUS METHODS OF ACTIVATED SINTERING OF REDUCED IRON.
Akademiya Nauk URSR, Kiev. Dopovidi, 1959, no. 4, p. 392-394.

Arifov, U. A. and others.
A COMPARATIVE INVESTIGATION OF ELECTRONIC EMISSION OF METALS UNDER THE BOMBARDMENT ACTION OF IONS OF INERTIA GASES AND ALKALI ELEMENTS IN AN ENERGY REGION UP TO 10 KEV.
Akademiya Nauk Uzbekskoy SSR [Tashkent]. Izvestiya. Seriya Fiziko-Matematicheskikh Nauk, 1958, no. 6. p. 49-55.

Arifov, U. A.
ON METHODS FOR INVESTIGATING SECONDARY PROCESSES WHICH ARE EFFECTED BY IONS DURING HIGH TEMPERATURES OF TARGETS AND IN THE PRESENCE OF THERMIONIC EMISSION.
Akademiya Nauk Uzbekskoy SSR [Tashkent]. Izvestiya. [Seriya] Fiziko-Matematicheskikh, 1958, no. 5, p. 15-22.

Arifov, U. A. and others.
SECONDARY EMISSION OF NEGATIVE PARTICLES DURING BOMBARDMENT WITH ALKALI ELEMENTS ION OF FOREIGN FILMS ON PURE METALS.
Akademiya Nauk [Uzbekskoy SSR, Tashkent]. Seriya Fiziko-Matematicheskikh Nauk, 1958, no. 2, p. 107-115.

Arifov, U. A.
ON THE PROBLEM OF THE PRESENCE OF A POTENTIAL DISLODGING OF ELECTRONS WHEN BOMBARDING METALS WITH IONS OF INERT GASES.
Akademiya Nauk Uzbekskoy SSR [Tashkent]. Seriya Fiziko-Matematicheskikh Nauk, 1958, no. 5, p. 5-13.

Astashenkov, P. T.
ATOMIC INDUSTRY.
Mono. Atomnaya Promyshlennost', Moscow, 1956, 240p.

Astashenkov, P.
HARD-WORKING WINGS.

Krylya Rodiny (USSR) 1959, no. 5, p. 22-24.

Bolbot, A. and Vodyanoy, A.
NEW PASSENGER (AIRCRAFT).
Tekhnika Molodezhi (USSR) 1959, [v. 27] no. 6, p. 16-17.

Bredov, M. M. and Okuneva, N. M.
CONCERNING THE DEPTH OF PENETRATION OF MEAN-ENERGY IONS INTO A SUBSTANCE.
Akademiya Nauk SSSR. Doklady, 1957, v. 113, no. 4, p. 795-796.

Bryunelli, B. Ye.
INTERPRETATION OF RESEARCH DATA ON GEOMAGNETIC DISTURBANCES OF A CORPUSCULAR NATURE.
Russian mono. Fizika Solnechnykh Korpuskulyarnykh Potokov i Ikh Vozdeystviye na Verkhnyuyu Atmosferu Zemli, Konferentsiya Komissii po Issledovaniyu Solntsa, 22-24 Nov 55, Trudy, 1957, p. 131-143.

Burdo, O. A.
ON CERTAIN REGULARITIES OF MAGNETIC DISTRUBANCES IN HIGH ALTITUDE.
Russian mono. Fizika Solnechnykh Korpuskulyarnykh Potokov i Ikh Vozdeystviye na Verkhnyuyu Atmosferu Zemli, Konferentsiya Komissii po Issledovaniyu Solntsa, 22-24 Nov 55, Trudy, 1957, p. 159-166.

Daum, N.
THE NORD AVIATION "GRIFFON" AND THE FUTURE OF THE TURBO RAMJET ENGINE FOR SUPERSONIC AIRCRAFT.
Luftfahrttechnik (West Germany) 1959, no. 5, p. 159-167.

Dmitriyev, N.
ELECTRONICS OF GUIDED MISSILES.
Radio (USSR) 1959, no. 3, p. 27-31.

Dorman, L. I.
INFORMATION ON SOLAR CORPUSCULAR STREAMS OBTAINED BY STUDYING COSMIC RAY VARIATIONS.
Russian mono. Fizika Solnechnykh Korpuskulyarnykh Potokov i Ikh Vozdeystiviye na Verkhnyuyu Atmosferu Zemli, Konferentsiya Komissii po Issledovaniyu Solntsa, 22-24 Nov 55, Trudy, 1957, p. 112-128.

Fedorochenko, I. M. and others.
ON THE EFFECT OF COMPRESSIVE STRESSES ON SHRINKAGE IN SINTERING OF POROUS BODIES.
Akademiya Nauk URSR, Kiev. Dopovidi, 1959, no. 3, p. 281-285.

Frankkamenetskiy, D. A.
BETA-PROCESSES AND ASTROPHYSICS.
Uspekhi Fizicheskikh Nauk (USSR) 1956, v. 58, no. 3, p. 415-432.

Gotze, K.
SAILPLANING IN SYRIA.
Deutsche Flugtechnik (Germany) 1959, no. 3, p. 87-92.

Gushchev, S.
HOW CAN WE PRODUCE SUBSTANCES WHICH ARE HARDER THAN DIAMOND.
Tekhnika Molodezhi (USSR) 1959, [v. 27] no. 6, p. 7-9.

Isayev, S. I.
ON HYDROGEN EMISSIONS IN THE SPECTRUM OF THE AURORA BOREALIS.
Russian mono. Fizika Solnechnykh Korpuskulyarnykh Potokov i Ikh Vozdeystviye na Verkhnyuyu Atmosferu Zemli, Konferentsiya Komissii po Issledovaniyu Solntsa, 22-24 Nov 55, Trudy, 1957, p. 178-181.

Ismailov, A. A.
BRIGHT FLOCCULI IN CA II LINES.
Akademiya Nauk Azerbaydzhanskoy SSR, Baku. Izvestiya, 1955, no. 8, p. 11-15.

Kaluza, E.
WELDING IN AIRCRAFT FABRICATION.
Deutsche Flugtechnik (Germany) 1959, no. 3, p. 92-95.

"KAMMER DER TECHNIK." AN ORGANIZATION DEDICATED TO THE ADVANCEMENT OF TECHNICAL AND ECONOMIC WAY TO DEMOCRACY AND SOCIALISM.
Deutsche Flugtechnik (Germany) 1959, no. 3, p. 86.

Karpenko, A. G.
THE FIRST STEP INTO THE COSMOS.
Izvestiya (USSR) 1957, 9 June, p. 4.

Karimov, M. G.
SOME RESULTS OF OBSERVATIONS OF THE SOLAR CORONA MADE WITHOUT AN ECLIPSE AND THE OUTLOOK FOR THE DEVELOPMENT OF A CORONAL OBSERVATION STATION.
Akademiya Nauk Kazakhskoy SSR, Alma-Ata. Astrofizicheskiy Institut. Izvestiya, 1956, no. 4, p. 89-98.

Karlicek, J.
THE IL-14T CZECH TRANSPORT AIRCRAFT.
Kridla Vlasti (Czechoslavakia) 1959, no. 10,

p. 14-15.

Kaznevskiy, V. P. and others.
WHAT ARE THE PROSPECTS FOR THE DEVELOPMENT OF ASTRO-NAVIGATION IN THE NEXT FEW YEARS.
Tekhnika Molodezhi (USSR) 1958, [v. 26] no. 2, p. 7-8.

Khokhlov, A. F.
DYNAMICS OF A MAGNETIC COMPASS ON AN AIRCRAFT.
Izvestiya Vyshikh Uchebnykh Zavedeniy. Priborostroyeniye (USSR) 1958, no. 5, p. 76-84.

Kozharskiy, L. A.
A METHOD OF CONSTRUCTING DIGITAL DIFFERENTIAL ANALYZERS.
Russian mono. Voprosy Teorii Matematicheskikh Mashin: Sbornik Pervyy, 1958, v. 1, p. 219-231.

F. R. KOZLOV RETURNED TO MOSCOW.
Izvestiya (USSR) 1959, no. 165, p. 1.

Lavrenko, V. O.
THE KINETICS AND MECHANISMS OF HIGH TEMPERATURE OXIDATION OF RHENIUM IN RECRYSTALLIZED AND COLD-WORKED STATES.
Akademiya Nauk URSR, Kiev. Dopovidi, 1958, no. 11, p. 1216-1220.

Lebedinskiy, A. I.
ROTATION OF THE SUN.
Astronomicheskiy Zhurnal (USSR) 1941, v. 18, no. 1, p. 10-25.

Lorenzen, M.
PROPELLER DEVELOPMENT AND MANUFACTURING PROBLEMS, PART III.
Deutsche Flugtechnik (Germany) 1959, no. 3, p. 82-85.

Lyakhovetskiy, M.
A HELICOPTER OVER THE ANTARCTIC.
Sovetskaya Aviatsiya (USSR) 1959, 14 June, p. 4.

Magosiro, A.
A TEMPORAL FIELD TRANSFERRING FROM THE VISUAL FIELD OF ONE EYE TO THAT OF ANOTHER EYE.
Shinrigaku Kenkyu (Japan) 1957, no. 28, p. 223-231.

Maksimkin, M. and Dolganov, S.
THE MI-4 HELICOPTER IN THE DESERT.
Grazhdanskaya Aviatsiya (USSR) 1959, no. 5, p. 30-31.

Mitropolskaya, O. N.
CONSTRUCTING A CURVE OF GROWTH FOR AND INVESTIGATING PHYSICAL CONDITIONS IN SOLAR FACULAE.
Akademiya Nauk SSSR. Krymskaya Astrofizicheskaya Observatoriya. Izvestiya (USSR) 1952, v. 9, p. 93-114.

Mogilevskiy, E. I.
EQUATION OF QUASISTATIONARY IONIZATION EQUILIBRIUM IN AREA F2 AND SOLAR CORPUSCULAR RADIATION.
Russian mono. Fizika Solnechnykh Korpuskulyarnykh Potokov i Ikh Vozdeystviye na Verkhnyuyu Atmosferu Zemli, Konferentsiya Komissii po Issledovaniyu Solntsa, 22-24 Nov 55, Trudy, 1957, p. 261-268.

Monin, G. A.
SPECTROREGISTER OF RADIAL VELOCITIES.
Akademiya Nauk SSSR. Krymskaya Astrofizicheskaya Observatoriya. Izvestiya (USSR) 1952, v. 8, p. 119-122.

Mustel, E. R.
DECREEMENT OF THE BALMER SERIES OF THE SPECTRUM OF FLOCCULI.
Akademiya Nauk SSR. Krymskaya Astrofizicheskaya Observatoriya. Izvestiya (USSR) 1951 v. 7, p. 3-33.

Mustel, E. R.
DISCUSSION OF POSSIBLE SOURCES OF GEOACTIVE CORPUSCLES IN THE SOLAR ATMOSPHERE.
Russian mono. Fizika Solnechnykh Korpuskulyarnykh Potokov i Ikh Vozdeystviye na Verkhnyuyu Atmosferu Zemli; Konferentsiya Komissii po Issledovaniyu Solntsa, 22-24 Nov 55, Trudy, 1957, p. 8-37.

Mustel, E. R.
EJECTION OF CALCIUM IONS FROM THE SUN'S SURFACE.
Akademiya Nauk SSSR. Krymaskaya Astrofizicheskaya Observatoriya. Izvestiya (USSR) 1948, v. 3, p. 3-30.

Mustel, E. R.
PHYSICAL NATURE OF CALCIUM FLOCCULI.
Akademiya Nauk SSSR. Krymskaya Astrofizicheskaya Observatoriya. Izvestiya (USSR) 1952, v. 9, p. 25-40.

Mustel, E. R. and Severnyy, A. B.
SPECTROPHOTOMETRY OF CHROMOSPHERIC ERUPTIONS.
Akademiya Nauk SSSR. Krymskaya Astrofizicheskaya Observatoriya. Izvestiya (USSR) 1950, v. 5, p. 3-23.

Nikolskiy, A. P.
MAGNETIC DISTURBANCES IN THE CIRCUMPOLAR REGION AND THE EXISTENCE OF A SECOND ZONE OF THEIR INTENSIVE ACTIVITY.
Russian mono. Fizika Solnechnykh Korpuskulyarnykh Potokov i Ikh Vozdeystviye na Verkhnyuyu Atmosferu Zemli, Konferentsiya Komissi po Issledovaniyu Solntsa, 22-24 Nov 55, Trudy, 1957, p. 144-58.

Nikolskiy, G. M.
PHOTOMETRY OF CORONAL RAYS AND CORPUSCULAR STREAMS.
Russian mono. Fizika Solnechnykh Korpuskukyarnykh Potokov i Ikh Vozdeystviye na Verkhnyuyu Atmosferu Zemli; Konferentsiya Komissii po Issledovaniyu Solntsa, 22-24 Nov 55, Trudy, 1957, p. 61-68.

Ol, A. I.
ON THE CONNECTION BETWEEN SOLAR ACTIVITY AND GEOMAGNETIC DISTURBANCES.
Russian mono. Fizika Solnechnykh Korpuskulyarnykh Potokov i Ikh Vozdeystviye na Verkhnyuyu Atmosferu Zemli, Konferentsiya Komissii po Issledovaniyu Solntsa, 22-24 Nov 55, Trudy, 1957, p. 167-173.

Osipov, V.
MOSCOW - BAGDAD.
Izvestiya (USSR) 1959, no. 165, p. 4.

Otitsina, T. and Naumova, S.
SOLID BENZINE.
Tekhnika Molodezhi (USSR) 1959 [v. 27] no. 3, p. 22-23.

Oyama, T. and Tarii, S.
EXPERIMENTAL STUDIES OF FIGURE-GROUND REVERSAL III.
Shinrigaku Kenkyu (Japan) 1957, no. 28, p. 210-222.

Pashkov, Yu.
A HIGH FLIGHT.
Sovetskaya Aviatsiya (USSR) 1959, no. 142, 1p.

Pikelner, S. B.
ELECTROMAGNETIC PHENOMENA IN CORPUSCULAR STREAM.
Russian mono. Fizika Solnechnykh Korpuskulyarnykh Potokov i Ikh Vozdeystviye na Verkhnyuyu Atmosferu Zemli, Konferentsiya Komissii po Issledovaniyu Solntsa, 22-24 Nov 55, Trudy, 1957, p. 105-111.

Pikelner, S. B.
INDUCTION PHENOMENA IN THE SOLAR ATMOSPHERE.
Akademiya Nauk SSSR. Krymskaya Astrofizicheskaya Observatoriya. Izvestiya (USSR) 1951, v. 7, p. 99-112.

Pikelner, S. B.
RESISTANCE TO MOVEMENT OF ATOMS IN STILL ATMOSPHERES AS APPLIED TO THE STARS OF VOLF-RAYE AND TO THE SUN.
Akademiya Nauk SSSR. Krymskaya Astrofizicheskaya Observatoriya. Izvestiya (USSR) 1948, v. 3, p. 51-63.

Pikelner, S. B.
THE THEORY OF THE SOLAR CORONA.
Akademiya Nauk SSSR. Krymskaya Astrofizicheskaya Observatoriya. Izvestiya (USSR) 1950, v. 5, p. 34-58.

Pilipenko, N.
FOR NEW TECHNOLOGY; TRAINING OF CREWS FOR THE IL-18 AIRCRAFT.
Grazhdanskaya Aviatsiya (USSR) 1959, no. 6, p. 28-29.

Pokrovskiy, G. I.
ELECTRIC EXPLOSION.
Tekhnika Molodezhi (USSR) 1957, 2v. 25] no. 9, p. 26-27.

Poloskov, S. M.
EFFECT OF SOLAR CORPUSCULAR RADIATION ON COMETS.
Russian mono. Fizika Solnechnykh Korpuskulyarnykh Potokov i Ikh Vozdeystviye na Verkhnyuyu Atmosferu Zemli; Konferentsiya Komissii po Issledovaniya Solntsa, 22-24 Nov 55, Trudy, 1957, p. 96-104.

Ponamarev, Ye. A.
CORPUSCULAR RADIATION OF THE SUN AND TOPOLOGY OF THE MAGNETIC FIELD IN THE SOLAR CORONA.
Russian mono. Fizika Solnechnykh Korpuskulyarnykh Potokov i Ikh Vozdeystviye na Verknyuyu Atmosferu Zemli; Konferentsiya Kommssii po Issledovaniyu Solntsa, 22-24 Nov 55, Trudy, 1957, p. 69-75.

Prokor, O.
THEORY OF PARACHUTE JUMPING: PARACHUTE JUMPING FOR LANDING ACCURACY.
Kridla Vlasti (Czechoslavakia) 1959, no. 8, p. 24-25.

Ravich, M.
ON QUEEN MAUD LAND.
Trud (USSR) 1959, 27 June, p. 4.

Rodionov, S. F.
NIGHT-SKY LUMINOSITY AND SOLAR ACTIVITY.
Russian mono. Fizika Solnechnykh Korpuskula Potokov i Ikh Vozdeystviye na Verkhnyuyu Atmosferu Zemli, Konferentsiya Komissia po Issledovaniyu Solntsa, 22-24 Nov 55, Trudy, 1957, p. 269-272.

Rostas, E.
TUNABLE MAGNETRONS.
Revue Technique C. F. T. H., 1956, no. 22, p. 69-79.

Ryabchikov, D. I. and Golbraykh, Ye. K.
THORIUM AND ITS COMPOUNDS.
Uspekhi Khimii (USSR) 1959, v. 28, no. 4, p. 408-435.

Seidel, F.
TESTING OF LANDING GEARS, PART II.
Deutsche Flugtechnik (Germany) 1959, no. 3, p. 79-81.

Sentyurikhina, L. N. and Oparina, Ye. M.
MOLYBDENUM DISULFIDE: A NEW LUBRICANT.
Russian mono. Smazochenyye Materialy, Prisadki k Nim i Parafinu, Trudy, 1958, no. 7, p. 409-414.

Seregin, A. V.
NUCLEAR FUEL.
Russian mono. Goryucheye dlya Dvigateley 1958, p. 113-134.

Seregin, A. V.
PROPELLANTS FOR ROCKET ENGINES.
Russian mono. Goryucheye dlya Dvigateley, 1958, p. 73-112.

Sergeyev, M. A.
FLOATING TWO-STAGE GYRO COMPASS WITH ELASTIC SUPPORTS FOR THE PRECESSION AXIS.
Izvestiya Vyshikh Uchebnykh Zavedeniy. Priborostroyeniye (USSR) 1958, no. 5, p. 69-76.

Severnyy, A. B.
INVESTIGATING THE SPECTRA OF A LARGE CHROMOSPHERE FLARE ON THE SUN, 5 AUGUST 1949.
Akademiya Nauk SSSR. Krymskaya Astrofizicheskaya Observatoriya. Izvestiya (USSR) 1952, v. 8, p. 19-50.

Severnyy, A. B.
SPECTROSCOPIC INVESTIGATION OF CORPUSCULAR EJECTIONS ON THE SUN.
Russian mono. Fizika Solnechnykh Korpuskulyarnykh Potokov i Ikh Vozdeystviye na Verkhnyuyu Atmosferu Zemli; Konferentsiya Komissii po Issledovaniyu Solntsa, 22-24 Nov 55, Trudy, 1957, p. 40-50.

Shcheritsa, P.
LANDING FROM A STRAIGHT LINE, AN IMPORTANT MEANS OF INCREASING THE EFFICIENCY OF FLIGHTS.
Grazhdanskaya Aviatsiya (USSR) 1959, no. 5, p. 22-23.

Shklovskiy, I. S.
THE ULTRAVIOLET RADIATION OF THE CROWN AND THE CHROMOSPHERE AND THE IONIZATION OF THE TERESTRIAL ATMOSPHERE.
Akademiya Nauk SSSR. Krymskaya Astrofizicheskaya Observatoriya. Izvestiya (USSR) 1948, v. 4, p. 80-113.

Sokolova, Ye. B., Krasnova, G. V. and others.
THE SYNTHESIS OF MONO-ALKYL-CYCLOHEXANES OF C_{15} - C_{18} COMPOSITION WITH AN INCREASED DENSITY.
Nauchnyye Doklady Vysshey Shkoly. Khimiya i Khimicheskaya Tekhnologiya (USSR) 1958, no. 2, p. 330-334.

Sokolov-Sokolenol, L. and Puzanov, G.
THE YAK-12A AIRCRAFT.
Krylya Rodiny (USSR) 1959, no. 5, p. 25-26.

Sosnova, A. K.
PHOTOGRAPHIC DETERMINATION OF THE INTEGRAL BRIGHTNESS OF THE CORONA DURING THE TOTAL SOLAR ECLIPSE OF 25 FEB 52, IN ARCHMAN.
Astronomicheskaya Observatoriya, Stalinabad. Byulleten' (USSR) 1954, no. 9, p. 22-24.

Strobel, F.
INTEGRAL CONSTRUCTION AND ITS MEANING TO THE AIRCRAFT INDUSTRY.
Deutsche Flugtechnik (Germany) 1959, no. 3, p. 69-74.

Sukharev, I.
THE FIRST SOVIET HELICOPTER.
Krylya Rodiny (USSR) 1959, no. 6, p. 13.

Talantov, A. V.
ANALYSIS OF PERFORMANCE OF THE SIMPLEST UNIFLOW COMBUSTION CHAMBER UNDER FLIGHT CONDITIONS.
Izvestiya Vysshikh Uchebnykh Zavedeniy. Aviatsionnaya Tekhnika (USSR) 1959, no. 2, p. 122-133.

Tschermak-Seysenegg, A.
CONCERNING THE ALLELOTROPE, A DEVICE

FOR TESTING SENSORY FUSION.
German mono. Documenta Opthalmologica, 1948, v. 2, p. 63-69.

Tschermak-Seysenegg, A.
ON SENSORY FUSION (ALLELOTROPY) AS THE BASIS OF STERESCOPY.
German mono. Documenta Ophthalmologica, 1948, v. 2, p. 52-63.

Tsyganov, I.
AN AIR EXPRESS GIANT.
Izvestiya (USSR) 1959, no. 173, 1p.

Ulbrich, R.
NEW SOVIET PROCESS FOR SYNTHESIS OF POLYMERS: POLYRECOMBINATION.
Kunstsoffe (West Germany) 1959, [v. 49] no. 1, p. 23-24.

Vitkevich, V. V.
INVESTIGATION OF MOVEMENTS IN THE SOLAR CORONA BY STUDYING FLARE-UPS IN RADIO-WAVE EMANATION.
Russian mono. Fizika Solnechnykh Korpuskul-yarnykh Potokov i Ikh Vozdeystviye na Verknyuyu Atmosferu Zemli; Konferentsiya Komissii po Issledovaniyu Solntsa, 22-24 Nov 55, Trudy, 1957, p. 87-95.

Vsekhsvyatskiy, S. K., Ponomarev, Ye. A. and others.
ON SOLAR CORPUSCULAR RADIATION.
Russian mono. Fizika Solnechnykh Korpuskul-yarnykh Potokov i Ikh Vozdeystviye na Verkhnyuyu Atmosferu Zemli; Konferentsiya Komissii po Issledovaniyu Solntsa, 22-24 Nov 55, Trudy, 1957, p. 51-58.

Weidner, M.
NEW METHOD OF DETERMING ELASTIC CHARACTERISTICS OF RAW MATERIALS.
Deutsche Flugtechnik (Germany) 1959, no. 3, p. 75-78.

Winker, K. H.
ICAO (INTERNATIONAL CIVIL AVIATION ORGANIZATION) AND IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION).
Deutsche Flugtechnik (Germany) 1959, no. 3, p. 65-68

Witkowski, Ryszard
A LIFT FOR THE SM-1 HELICOPTER.
Skrzydlata Polska, 1959 [v. 15] no. 27, p. 8-9

Yakovkin, N. A.
ION DENSITY IN THE SOLAR CORONA.
Kiev U. Astronomichna Observatoriya. Publikatsiy (USSR) 1950, no. 4, p. 17-31

Zakharov, A. M
AN INVESTIGATION OF THE HEAT RESISTANCE OF CERTAIN ALUMINUM WROUGHT ALLOYS.
Izvestiya Vysshikh Uchebnykh Zavedeniy. Tsvetnaya Metallurgiya (USSR) 1959, no. 1, p. 121-128

PERIODICALS TRANSLATED COVER-TO-COVER

Abstracts of Soviet Medicine.
Part A. Basic Medical Sciences $15.00/Year
Part B. Clinical Medicine $15.00/Year
Order from:
Excerpta Medica Foundation, $25.00/Year
2 East 103rd Street, (combined
New York 29, New York subscription)

Akademiya Nauk SSSR. Doklady.
[Biological Science Papers] (Proceedings of the Academy of Sciences of the USSR. Biological Science Papers)
Order from:
American Institute of Biological Sciences,
2000 P Street, N.W., $20.00/Year
Washington 6, D.C.

Adademiya Nauk SSSR. Doklady.
[Botanical Science Papers] (Proceedings of the Academy of Sciences of the USSR. Botanical Science Papers)
Order from:
American Institute of Biological Sciences
2000 P Street, N.W., $7.50/Year
Washington 6, D.C.

Akademiya Nauk SSSR. Doklady.
Otdel Biokhimii (Proceedings of the Academy of Sciences of the USSR. Biochemistry Section)
Order from:
American Institute of Biological Sciences,
2000 P Street, N.W., $15.00/Year
Washington 6, D.C. $10.00/Year *

Akademiya Nauk SSSR. Doklady.
Otdel Fizcheskoy Khimii (Proceedings of the Academy of Sciences of the USSR. Physical Chemistry Section)
Order from:
Consultants Bureau, Inc.,
227 West 17th Street, $160.00/Year
New York 11, New York

Akademiya Nauk SSSR. Doklady.
Otdel Geokhimii (Proceedings of the Academy of Sciences of the USSR. Geochemistry Section)
Order from:
Consultants Bureau, Inc., $15.00/Year
227 West 17th Street,
New York 11, New York

Akademiya Nauk SSSR. Doklady.
Otdel Geologii (Proceedings of the Academy of Sciences of the USSR. Geology Section)
Order from:
Consultants Bureau, Inc., $200.00/Year
227 West 17th Street,
New York 11, New York

*Subscription rate to libraries of academic institutions

Akademiya Nauk SSSR. Doklady.
Otdel Khimicheskaya Tekhnologiya (Proceedings of the Academy of Sciences of the USSR. Chemical Techn ology Section)
Order from:
Consultants Bureau, Inc., $15.00/Year
227 West 17th Street,
New York 11, New York

Akademiya Nauk SSSR. Doklady.
Otdel Khimii (Proceedings of the Academy of Sciences of the USSR. Chemistry Section)
Order from:
Consultants Bureau, Inc., $110.00/Year
227 West 17th Street,
New York 11, New York

Akademiya Nauk SSSR. Doklady.
Otdel Prikladnoy Fiziki (Proceedings of the Academy of Sciences of the USSR. Applied Physics Section)
Order from:
Consultants Bureau, Inc., $200.00/Year
227 West 17th Street,
New York 11, New York

Akademiya Nauk SSSR. Doklady.
[Physics Papers] (Proceedings of the Academy of Sciences of the USSR. Physics Papers)
Order from:
American Institute of Physics, $35.00/Year
335 East 45th Street, $15.00/Year*
New York 17, New York

Akademiya Nauk SSSR. Izvestiya.
Seriya Fizicheskaya (Bulletin of the Academy of Sciences of the USSR. Physics Series)
Order from:
Columbia Technical Translations, $215.00/Year
5 Vermont Avenue,
White Plains, New York

Akademiya Nauk SSSR. Izvestiya.
Seriya Geofizicheskaya (Bulletin of the Academy of Sciences of the USSR. Geophysics Series)
Order from:
American Geophysical Union, $25.00/Year
1515 Massachusetts Avenue, N.W.,
Washington 5, D.C.

Akademiya Nauk SSSR. Izvestiya.
Seriya Geologicheskaya (Bulletin of the Academy of Sciences of the USSR. Geology Series)
Order from:
National Academy of Sciences--American
Geological Institute, $45.00/Year
2101 Constitution Avenue, N.W., $27.00/Year
Washington 25, D.C.

Akademiya Nauk SSSR. Otdeleniye Khimicheskikh Nauk. Izvestiya (Bulletin of the Academy of Sciences of the USSR. Division of Chemical Sciences)
Order from:
Consultants Bureau, Inc., $45.00/Year
227 West 17th Street, $15.00/Year*
New York 11, New York

Akusticheskiy Zhurnal (Acoustics Journal)
Order from:
American Institute of Physics, $12.00/Year
335 East 45th Street,
New York 17, New York

Antibiotiki (Antibiotics)
Order from:
Consultants Bureau, Inc. $25.00/Year
227 West 17th Street,
New York 11, New York

Astronomicheskiy Zhurnal (Astronomical Journal)
Order from:
American Institute of Physics, $25.00/Year
335 East 45th Street, $10.00/Year*
New York 17, New York

Atomnaya Energiya (Atomic Energy)
Order from:
Consultants Bureau, Inc., $75.00/Year
227 West 17th Street,
New York 11, New York

Atomnaya Energiya (Atomic Energy)
Selected papers incorporated in International Journal of Nuclear Energy, 3 volumes/Year.
Order from:
Pergamon Press, Inc., $20.00/volume
122 East 55th Street, $ 9.80/volume
New York 22, New York to individuals

Avtomaticheskaya Svarka (Automatic Welding)
Order from:
British Welding Research Association
29, Park Crescent, $30.00/Year
London, W.I., England

Avtomatika i Telemekhanika (Automation and Remote Control)
Order from:
Instrument Society of America, $30.00/Year
313 Sixth Avenue, $15.00/Year*
Pittsburgh 22, Pennsylvania

Biofizika(Biophysics)
Order from:
Pergamon Press, Inc., $30.00/Year
122 East 55th Street,
New York 22, New York

*Subscription rate to libraries of academic institutions

**Subscription rate to members of cooperating and sponsoring societies of Acta Metallurgica

Biokhimiya (Biochemistry)
Order from:
Consultants Bureau, Inc $20.00/year
227 West 17th Street,
New York 11, New York

Byulleten' Eksperimental'noy Biologii i Meditsiny (Bulletin of Experimental Biology and Medicine)
Order from:
Consultants Bureau, Inc., $20.00/year
227 West 17th Street,
New York 11, New York

Byulleten' Izobreteniy (USSR Patents and Inventions)
Order from:
Pergamon Press, Inc. $100.00/year
122 East 55th Street
New York 22, New York

Elektrichestvo (Electric Technology)
Selected papers
Order from:
Pergamon Press, Inc., $56.00/year
122 East 55th Street,
New York 22, New York

Electrosvyaz' (Telecommunications)
Order from:
Pergamon Press, Inc., $30.00/year
122 East 55th Street, $15.00/year
New York 22, New York to individuals

Entomologicheskoye Obozreniye (Entomological Review)
Order from:
American Institute of Biological Sciences,
2000 P Street, N.W., $25.00/year
Washington 6, D.C. $12.00/year*

Farmakologiya i Toksikologiya (Pharmacology and Toxicology)
Order from:
Consultants Bureau, Inc., $25.00/year
227 West 17th Street,
New York 11, New York

Fizika Metallov i Metallovedeniye (The Physics of Metals and Metallography)
Order from:
Pergamon Press, Inc., $30.00/year
122 East 55th Street, $15.00/year**
New York 22, New York

Fizika Tverdogo Tela (Solid State Physics)
Order from:
American Institute of Physics $55.00/year
335 East 45th Street, $25.00/year*
New York 17, New York

Fiziologicheskiy Zhurnal SSSR im. I. M. Sechenova (I. M. Sechenov Physiological Journal)
Order from:
Pergamon Press, Inc., $45.00/year
122 East 55th Street,
New York 22, New York

Fiziologiya Rastenii (Plant Physiology)
Order from:
American Institute of Biological Sciences, $15.00/year
2000 P Street, N.W.,
Washington 6, D.C.

Geokhimiya (Geochemistry)
Order from:
The Geochemical Society, $20.00/year
c/o Dr. Earl Ingerson, $10.00/year*
University of Texas,
Austin 12, Texas

Geologiya Nefti (Petroleum Geology)
Order from:
The Review of Russian Geology, $18.00/year
533 Harden Street,
Columbia, South Carolina

Izmeritel'naya Tekhnika (Measurement Techniques)
Order from:
Instrument Society of America, $25.00/year
313 Sixth Avenue, $12.00/year*
Pittsburgh 22, Pennsylvania

Kauchuk i Rezina (Soviet Rubber Technology)
Order from:
Maclaren & Sons Ltd. $50.00/year
131, Great Suffolk Street $25.00/year*
London, S.E. 1, England

Kemisk Maanedsblad og Nordisk Handelsblad for Kemisk Industri(Chemical Monthly Journal and Scandinavian Trade Journal for the Chemical Industry). Selected articles.
Order from:
Erik Arnhem's Translation Service, $35.00/year
P.O. Box 46053,
Hollywood 46, California

Kolloidnyy Zhurnal (Colloid Journal)
Order from:
Consultants Bureau, Inc., $80.00/year
227 West 17th Street
New York 11, New York

Kristallografiya (Crystallography)
Order from:
American Institute of Physics $25.00/year
335 East 45th Street, $10.00/year*
New York 17, New York

Metallovedeniye i Termicheskaya Obrabotka Metallov (Metal Science and Heat Treatment)
Order from:
Henry Brutcher,
Technical Translations - (not known)
P. O. Box 157,
Altadena, California

*Subscription rate to libraries of academic institutions

***Subscriptions of ASME members and members of affiliated societies in the United States, Canada, and Mexico handled by ASME and subject to 20% discount. All other subscriptions handled by Pergamon Press.

Metallurg (Metallurgist)
Order from:
Consultants Bureau, Inc., $95.00/year
227 West 17th Street,
New York 11, New York

Mikrobiologiya (Microbiology)
Order from:
American Institute of Biological Sciences,
2000 P Street N.W., $20.00/year
Washington 6, D.C.

Optika i Spektroskopiya (Optics and Spectroscopy)
Order from: Optical Society members-Free
American Institute of Physics Non-members-
335 East 45th Street $25.00/year
New York 17, New York Foreign- $28/00/year

Pochvovedeniye (Soil Science)
Order from:
American Institute of Biological Sciences,
2000 P Street, N.W., $40.00/year
Washington 6, D.C. $20.00/year*

Priborostroyeniye (Instrument Construction)
Order from:
Taylor and Francis Ltd. $17.10/year
Red Lion Court, Fleet Street, $ 8.55/year*
London, E.C. 4, England

Pribory i Tekhnika Eksperimenta (Instruments and Experimental Techniques)
Order from:
Instrument Society of America, $25.00/year
313 Sixth Avenue, $12.50/year*
Pittsburgh 22, Pennsylvania

Prikladnaya Matematika i Mekhanika (Journal of Applied Mathematics and Mechanics)
Order from:
Pergamon Press, Inc., $35.00/year***
122 East 55th Street,
New York 22, New York

Problemy Gematologii i Perelivaniya Krovi (Problems of Hematology and Blood Transfusion)
Order from:
Pergamon Press, Inc., $20.00/year
122 East 55th Street,
New York 22, New York

Radiotekhnika (Radio Engineering)
Order from:
Pergamon Press, Inc., $30.00/year
122 East 55th Street, $15.00/year
New York 22, New York to individuals

Radiotekhnika i Elektronika (Radio Engineering and Electronics)
Order from:
Pergamon Press, Inc., $45.00/year
122 East 55th Street, $22.50/year
New York 22, New York to individuals

Referativnyy Zhurnal. Geologiya (Abstract Journal. Geology)
Order from:
National Academy of Sciences-- $40.00/year
American Geological Institute, $24.00/year*
2101 Constitution Avenue, N. W.,
Washington 25, D. C.

Referativnyy Zhurnal. Metallurgiya (Abstract Journal. Metallurgy). Selected Abstracts.
Order from:
Pergamon Press, Inc., $50.00/year
122 East 55th Street, $25.00/year**
New York 22, New York

Sovetskaya Pedagogika (Soviet Education)
Order from:
International Arts and Sciences Press,
33 West 42nd Street, $70.00/year
New York 36, New York

Stal (Steel)
Order from:
The Iron and Steel Institute £20.12.0
4, Grosvenor Gardens
London, S. W. 1, England

Stanki i Instrument (Machines and Tooling)
Order from:
Production Engineering Research Association
of Great Britain £3.10.0/year
Melton Mowbray £4.4.0 for
Leicestershire, England overseas mailing

Steklo i Keramika (Glass and Ceramics)
Order from:
Consultants Bureau, Inc., $80.00/year
227 West 17th Street,
New York 11, New York

Svarochnoye Proizvodstvo (Welding Production)
Order from:
British Welding Research Association
29, Park Crescent
London, W. 1, England £6.0.0/year

Teoriya Veroyatnostey i Yeye Primeneniya (Theory of Probability and its Applications)
Order from:
Society for Industial and Applied Mathematics,
Box 7541 $18.00/year
Philadelphia 1, Pennsylvania $ 9.50/year*

Tsement (Cement)
Order from:
Consultants Bureau, Inc., $60.00/year
227 West 17th Street,
New York 11, New York

Uspekhi Fizicheskikh Nauk (Progress of Physical Sciences)
Order from:
American Institute of Physics, $45.00/year
335 East 45th Street, $20.00/year*
New York 17, New York

Vestnik Mashinostroyeniya (Russian Engineering Journal)
Order from:
Production Engineering Research
Association
Staveley Lodge
Melton Mowbray
Leicestershire, England £8.0.0/year

Voprosy Ekonomiki (Problems of Economics)
Order from:
International Arts and Sciences Press,
33 West 42nd Street, $50.00/year
New York 36, New York

Voprosy Onkologii (Problems of Oncology)
Order from:
Pergamon Press, Inc.,
122 East 55th Street, $30.00/year
New York 22, New York

Voprosy Virusologii (Problems of Virology)
Order from:
Pergamon Press, Inc., $20.00/year
122 East 55th Street,
New York 22, New York

Zavodskaya Laboratoriya (Factory Laboratory)
Order from:
Instrument Society of America, $35.00/year
313 Sixth Avenue, $17.50/year*
Pittsburgh 22, Pennsylvania

Zhurnal Analiticheskoy Khimii (Journal of Analytical Chemistry)
Order from:
Consultants Bureau, Inc., $80.00/year
227 West 17th Street,
New York 11, New York

Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki (Journal of Experimental and Theoretical Physics) Translation journal known as Soviet Physics-JETP
Order from:
American Institute of Physics, $75.00/year
335 East 45th Street, $35.00/year*
New York 17, New York

Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii (Journal of Microbiology, Epidemiology and Immunobiology)
Order from:
Pergamon Press, Inc., $50.00/year
122 East 55th Street,
New York 22, New York

Zhurnal Neorganicheskoy Khimii (Russian Journal of Inorganic Chemistry)
Order from:
Cleaver-Hume Press Ltd. $90.00/year
31 Wright's Lane $67.50/year*
London, W. 8, England

*Subscription rate to libraries of academic institutions

**Subscription rate to members of cooperating and sponsoring societies of Acta Metallurgica

Zhurnal Obshchey Khimii (Journal of General Chemistry)
Order from:
Consultants Bureau, Inc., 227 West 17th Street, New York 11, New York
$90.00/year
$30.00/year*

Zhurnal Prikladnoy Khimii (Journal of Applies Chemistry)
Order from:
Consultants Bureau, Inc., 227 West 17th Street, New York 11, New York
$60.00/year
$20.00/year*

Zhurnal Tekhnicheskoy Fiziki (Journal of Technical Physics)
Order from:
American Institute of Physics, 335 East 45th Street, New York 17, New York
$35.00/year
$25.00/year*

Zhurnal Vysshey Nervnoy Deyatel'nosti im. Pavlova (Pavlov Journal of Higher Nervous Activity)
Order from:
Pergamon Press, Inc., 122 East 55th Street, New York 22, New York
$30.00/year

*Subscription rate to libraries of academic institutions

AUTHOR INDEX

Author	Page
Abayeva, B. T.	789
Agafonov, A. V.	789
Ageno, M.	774
Ageykin, D. I. (BR-SOV/2309)	A-3
Agronomov, A. E.	779
Agte, C.	805
Aksel'rod, M. M.	810
Albert, P. W.	776
Aleksandrov, A. B.	800
Aleksandrov, M. M.	803
Alimarih, I. P.	B-1
Aloksenko, Ya. N.	B-1
Ambrosius, F.	794
Amelinckx, S.	828
Anan'ina, A. M.	769
Andreyuk, V. A.	798
Andryanov, K. A.	794
Antonov, A. V.	825
Apayev, B. A.	821
Assmann	823
Avak'yants, G. M.	828
Avericheva, B. Ye.	830
Aygina, N. P.	782
Bachem, C.	774
Bagno, O.	774
Balandin, A. A.	770
	773
	779
Balashov, M. A. (BR-SOV/2309)	A-3
Balicki, M.	824
Balkovets, D. S.	B-1
Bal'yan, R. Kh.	794
Baramboym, N. K.	774
Bardizh, V. V.	794
Bartenin, I. V.	B-1
Bartholome, W.	807
Bashilov, A. A.	810
Bazhenov, M. I.	804
Beck, W.	818
Becker, G.	810
Belen'kiy, Ya. E.	783
Belova, S. R.	811
Belov, N. V.	B-1
Benesovsky, F.	769
Bertinov, A. L.	787
Bezuglyy, V. D.	767
Birthler, R.	789
Bjerkan, P.	765
Blaha, F.	819
Blumenfeld, L. A.	B-1
Blum, E. J.	759
Bogolyubov, N. N.	831
Bogolyubov, V. E.	775
Bogomolov, A. I.	784
Boischot, A.	759
Bokii, G. B.	B-1
Bondarenko, V. M.	794
Bonnefoi, A.	762
Borgy, P.	806
Borishanskiy, V. M.	B-2
Borisovskiy, S. P.	794
Bosev, A. I.	B-1
Bramstedt, F.	801
Brandenberger, J. E.	795
Bratring, K.	813
Brenet, J.	829
Brenner, P.	824
Briault, M.	769
Brodskiy, A. M.	767
Bron, O. B.	803
Bubnov, Yu. N.	772
Bugayenko, L. T. (BR-SOV/2326)	A-3
Buleyev, N. I.	B-1
Burshteyn, Ye. L.	826
Buslayev, Y. A.	778
Butalov, V. A. (BR-SOV/2232)	A-1
Buttler, W. M.	828
Buznikov, Ye. F.	789
Bychkovakiy, A. L.	804
Castro, R.	821
Chalyy, G. V.	795
Chang, H.	781
Charles, F.W. B.	792
Chatelet, J.	829
Chaykovskaya, M. Ya.	765
Ch'en, C. -h.	758
Ch'en, P. -f.	763
Cheng, C.	784
Chevela, B. A. (BR-SOV/2285)	A-2
Chi, M. -h.	784
Ch'ien, J. Y.	792
Chizhevskiy, M. G.	758
Ch'u, C. -h.	795
Chu, K. c.	785
Chudinova, L. I.	780
Chuiko, A.	792
Chuloshnikov, P. L.	B-1
Churkeyev, N. Y.	B-3
Cihal, V.	779
Claus, W.	819
Conix, A.	770
Constantinesco, G.	799
Coster, L. de	761
Cueilleron, J.	823
Czike, K.	783
Daetwyler, G.	817
Danilov, L. I.	804
Dankov, P. D.	829
Dannohl, W.	820
Davtyan, O. K.	775
Davydova, S. L.	771
Debye, P.	775
Deibel, R.	764
Dekeyser, W.	828
Demin, M. P.	822
Denisov, H. G.	833
Denisov, N.	B-3
Deutloff, E.	789
Dezeimeria, J. -E.	763
Diekotter, F. W.	777
Dietz, G.	779
Dietz, H.	805
Dinelli, D.	789
Distler, G. I.	827
Dmitriev, P. T.	B-1
Dmitriyeva, V. N.	767
Dmitriyevskiy, V. A.	B-1
Dobrovol'skiy, S. V.	775
Dobryanskiy, A. F.	784
Dollfus, A.	760
Drabkin, A. E.	767
Druzhinin, G. V.	815
Dubrova, G. B.	802
Dufek, V.	805
Dzhurdzhu, T.	759
Eck, B.	789
Eggerer, H.	761
Elsner, G.	823
El'tsufin, M. A. (BR-SOV/2314)	A-3
Emanuel', N. M.	771
Emyashev, A. V.	819
Engel, F.	810
Erismann, H.	758
Erra, A.	807
Ershler, B. V.	B-1
Etlis, V. S.	772
Ettinger, Ye. L.	795
Euler, H. v.	775
Eydinova, M. B.	764
Fedorov, E. A.	818
Fedotova, T. V.	777
Fedot'yev, N. P.	766
Fetting, F.	775
Figuerido Santurtun, J. A.	764
Filippochkin, V. G. (BR-SOV/2285)	A-2
Fink, H. P.	776
Fink, P.	814
Finogenov, I. S.	784
Fischer, F.	813
Fisher, I. Z.	777
Florenskiy, K. P.	759
Fodor, G.	770
Fodor, P. C.	783
Fok, V. A.	833
Fono, A.	787
Fratkina, G. P.	767
Fridman, S. M.	811
Fujita, K.	763
Gaarder, T.	765
Gal'pern, G. D.	790
Gambaryan, N. P.	771
Gantmacher, F. R.	815
Garaico-Echea, A. I.	786

Author	Page
Garaico-Echea, A. I.	785
Garif'yanov, N. S.	810
Gartner, K.	776
Gerasimov, V. V.	776
Gerech, A.	770
Gershman, B. N.	833
Gersonde, M.	814
Ginzburg, V. L.	833
Glazov, V. M.	829
Glenz, O.	811
Glukh, Ye. M.	795
Golovich, G. F. (BR-SOV/2237)	A-1
Goncharevskiy, M. S.	806
Gonikberg, M. G.	776
Gorbunova, K. M.	776
	829
Gorelik, A. N.	761
Gorodetskiy, Yu. S.	780
Gorod'yetskiy, S. A.	795
Goryunov, A. A.	B-1
Goskov, Yu. K.	B-1
Grabin, V. F.	B-2
Grassman, P.	832
Gribova, E. A.	767
Griessbach, R.	776
Grilikhes, S. Ya.	766
Grison, P.	762
Grobe, A.	812
Grobe, V.	812
Grosjean, C. C.	828
Grossmann, L.	795
Grund, A.	829
Guastalla, J.	776
Gubanov, A. I.	829
Gueussier, A.	821
Guinier, A.	829
Gur'ba, P. K.	783
Gurevich, S. M.	B-2
Gusev, I. V.	816
Haas, M.	823
Haddon, W.	799
Hagedorn, A.	764
Hamanaka, S.	764
Hein, F.	776
Heinz, W.	776
Helvetius, J. C. A.	763
Hempel, M.	807
Hertwig, P.	765
Herwig, H. U.	776
Herz, E. von, Jr.	786
Herz, E. von, Sr.	786
Hess, K.	812
Heumann, T.	777
Higuchi, T.	814
Hirasawa, H.	792
Hirota, K.	777
Hock, H.	771
Hoffman, K. H.	810
Holzkamp, E.	774
Honsberg, K.	813
Hund, F.	768
	769
Hunecke, H.	803
Hunsinger, W.	832
Hwang, S. S.	782
Ikehara, W.	763
Ilyushin, A. A.	B-2
Inami, K.	764
	771
Inoue, T.	762
Ipatov, P. M.	795
Irisawa, K.	834
Ishihara, K.	771
Ishkin, I. P.	789
Iskhakov, Kh. A.	789
Ito, H.	790
Ito, K.	764
Ivanov, K. I.	811
Ivanov, N. P.	796
Ivanov, V. S.	811
Jacquet, M. P.	807
Jager, A.	771
Jenckel, E.	776
	810
Jenkner, H.	790
Johansson, C. H.	816
	824
Juza, R.	769
Kabanov, B. N.	777
Kabanova-Weller, Ye. N.	760
Kadyrov, S.	817
Kakushadze, L. E.	B-1
Kaliko, M. A.	777
Kalitvyanskiy, V. I.	794
	796
Kangro, C.	779
Kapatsina, V.	759
Kaplan, M. Ya.	796
Karaulova, Ye. N.	790
Kariyone, T.	762
Karpukhin, P. P.	771
Kartaslov, N. P.	B-3
Katina, N. F.	789
Katsenelenbaum, Z. S. (BR-SOV/1920)	A-1
Kattwinkel, G.	771
Kazanskiy, B. A.	790
Kazantsev, A.	759
Kazarnovskiy, S. N.	790
Keller, A. A.	789
Khachaturov, T.	809
Khalfin, L. A.	783
Khalif, A. L.	811
Khaykovich, I. M.	783
Khizhnyakov, V.	758
Khmelnitskiy, Yu. L.	771
Khomyakov, M. V.	796
Khrushchev, N. S.	786
Khutoretskiy, G. M.	795
Kieffer, R.	769
Kirillov, Yu. I.	759
Kishkin, S. T.	B-2
Klare, H.	812
Klauber, A.	769
Klein, O.	777
Kleymenov, V. F.	808
Kling, R.	767
Klingelhoffer, H.	801
Klinger, M. I.	830
Klimov, N. A. (BR-SOV/2202)	A-1
Kloss, A.	803
Klushin, M. I. (BR-SOV/2204)	A-1
Klyarfelda, B. N.	B-2
Kneser, H. O.	818
Knunyants, I. L.	771
Kobrinskiy, A. Ye.	800
Kocher, H.	827
Koch, Rudolf	B-2
Kocheshkov, A. A.	790
Kohlmeyer, J.	814
Kolenko, Ye. A.	B-2
Kolesnikov, G. S.	771
Kollegin, A. V.	814
Kolomenskiy, A. A.	826
Kolosov, S. P. (BR-SOV/2309)	A-3
Komar', N. P.	767
Komarovskiy, A. N. (BR-SOV/2265)	A-2
Konak, E. R.	769
Konakov, P. K.	804
Kondrat'yev, V. N.	777
Konovalov, K. N.	821
Kopylova, E. N.	765
Korablev, M.	801
Korchemnyy, L. I.	804
Korner, H.	776
Korneva, N. K.	821
Korneychuk, G. P.	777
Koropaltsev, N. V.	814
Korringa, P.	802
Korshunov, B. G.	772
Korshunov, Yu. V.	825
Kosenko, S. A.	761
Koshevaya, Ye. F.	804
Koshevnik, A. Yu.	777
Koshkin, N. V.	771
Koster, W.	819
	820
	821
Kostyuk, A. G.	816
Kovalskaya, A. V.	796
Koyano, M.	782
Krapukhin, V. M.	807
Krasnopol'skiy, D. Z. (BR-SOV/2289)	A-2
Kraus, A.	812
Krayko, E. A.	761
Krentsel', B. A.	773
Kreshchanovskiy, N. S.	822
Kresze, G.	830
Kreyn, S. E.	811
Krichmar, S. I.	820
Kromer, H.	796
Kronstein	796
Krshizhanovskiy, R. E.	822
Kruglyakova, K. Ye.	771
Krupkowski, A.	824
Krylov, E. I.	769
Kuchinskiy, G. S.	797
Kukina, A. I.	770
Kulakovskiy, V. B.	797
Kulikovskiy, A. G.	831
Kursa, G.	786

Author	Page
Kusakov, M. M.	777
Kutateladze, S. S.	B-2
Kutikov, A. A.	B-2
Kutzendorfer, J.	B-3
Kuzin, A. M. (BR-SOV/2292)	A-2
Kuzmich, V. I.	777
Kuzovkov, N. T.	797
Kvochkin, F. A.	810
Lang, K.	819
Lang, S.	771
Lange, E.	777
Langenecker, B.	819
Lapis, M. A.	804
Laubi, O.	769
Lavrovskiy, K. P.	767
Lazarev, L. N.	768
Lebedev, A. F. (BR-SOV/2283)	A-2
Lebedev, S. V.	797
Lebedev, T. S.	781
Lebedeva, Yu.	801
Leboutet, L.	834
Legagneur, E. S.	759
Leikis, D. I.	777
Lemiere, G. -A. -P.	758
Levchenko, A. I.	771
Levin, E. S.	767
Levin, M. L.	799
	807
Liempt, J. A. M. v.	778
Liftshits, I. M.	B-2
Linde, J. O.	824
Lindner, R.	825
Lipshteyn, R. A.	811
Litkens, I. V.	798
Litvinova, E. L.	797
Lomovskiy, V. A. (BR-SOV/2311)	A-3
Lubman, N. M.	777
Lukasiak-Wardzinska, H.	768
Luk'yanov, P. I.	816
Lyapunov, A. A.	834
Lynen, F.	761
Lyot, B.	760
Lyushin, S. F.	786
Lyuter, R. A.	797
Maass, E.	825
Makasheva, O. P.	811
Maki, M.	772
Malinskiy, Yu. M. (BR-SOV/2326)	A-3
Malow, N. N.	827
Maltschewsky, N.	802
Malyarov, V. V. (BR-SOV/2211)	A-1
Malyusov, V. A.	790
Manfredi, A.	801
Marchenko, Ye. A.	798
Markov, B. F.	778
Markovskiy, N. I.	783
Marneffe, R. de	761
Maruyama, E.	782
Masi, O.	807
Mastryukova, T. A.	773
Matsuura, K.	763
Matzke, H. J.	825
May, A.	803
Mazzanti, G.	772
Mazzoni, L.	805
Meiners, K.	803
Meixner, J.	818
Melekhonova, I. I.	771
Mellenheim, J. M. v.	769
Meshitsuka, G. Y.	777
Meyer, K.	812
Michel, M.	759
Mikhaylov, B. M.	772
Mikhaylova, N. V.	827
Mikhaylovskiy, V. N.	783
Mikhaylovskiy, Yu. N.	825
Mikhel'son, A.	811
Miksa, J.	786
Minayev, A. A.	799
Minsker, K. S.	772
Mirgalovskaya, M. S.	829
Mitbreyt, I. M.	764
Moller, H.	807
Monin, A. S.	782
Morand, S. -F.	761
Morozov, I. S.	770
	772
Morozov, N. S.	770
Moser, H.	816
Mosikhin, E. P.	811
Mozalevskiy, A. V.	797
Mukhina, T. N.	773
Muller-Rid, W.	815
Murashov, A. M. (BR-SOV/2202)	A-1
Murav'yev, I. M.	786
Musachov, A. I.	B-1
Nagano, M.	812
Natta, G.	772
Nazarenko, V. A.	768
Nefedova, V. I. (BR-SOV/2309)	A-3
Nerdel, F.	830
Nesina, L. V.	832
Nesemyanov, A. N.	772
Neumayer, W. W.	807
Neyman, Z. B.	800
Nienhold, J.	797
Niinivaara, F. P.	802
Nikitina, N. I.	816
Nikitina, T. S. (BR-SOV/2326)	A-3
Nikitin, V. N.	827
Nikitin, Yu. S.	777
Nikolayev, G. A.	B-2
Nikolayev, N. E.	778
Nishi, M.	763
Nitsch, A.	805
Nomura, S.	792
Novikov, A.	787
Obraztsov, V. A.	803
Obukhov, A. M.	782
Oda, R.	772
Ohashi, K.	790
Okada, S.	778
Ollendorf, F.	803
Onikiyenko, A. Ya.	802
Ono, H.	813
Osipov, K. A.	778
	830
Panchenko, I. D.	778
Pankratova, M. Yu.	764
Panov, M. P.	786
Pascard, R.	B-2
Pascaud, C.	823
Pastukhov, M.	B-2
Pausch, G.	815
Payevskiy, V. A. (BR-SOV/2297)	A-2
Pechhold, E.	760
Peetz, U.	768
	769
Pei, L. S.	785
Pekhov, A. P.	763
Perevalova, E. G.	772
Perrot, M.	778
Pervukhina, M. N.	777
Peters, W.	790
Petrakova, L. A.	829
Petrenko, A. G.	B-1
Petrov, D. F.	762
Petunin, P.	B-2
Pigolkin, P. N.	758
Pilitsyn, A. P. (BR-SOV/2314)	A-3
Pinsker, Z. G.	830
Plotnikov, V. A.	768
Poganski, S.	797
Pohja, M. S.	802
Pokorniy	802
Polotnyuk, V. Ya.	775
Polyakova, A. M.	773
Pomerantzev, B. I.	765
Popov, E. M.	773
Popov, V. I.	811
Popova, N. I.	773
Popowicz, J.	768
Potapova, A. D.	762
Prazak, M.	779
Prazak, V.	779
Prilizhayeva, Ye. N.	773
Protopopov, Kh. V.	B-2
Proyavkin, E. T.	784
Pruzner, S. L. (BR-SOV/1887)	A-1
Pukhov, G. E.	794
Querzoli, R.	774
Rabinovich, V.	786
Rabkin, D. M.	B-2
Raess, P.	807
Rajewsky, B.	B-2
Rajhathy, T.	762
Rakipova, L. R.	782
Rakitin, Yu. V.	762
Rakova, G. V.	827
Ramos, E. A.	834
Rasworschegg, H.	820
Ravich-Scherbo, Yu. A.	802
Rebald, E.	764
Reiner, S.	825
Repin, N. N.	786
Reshetnikov, Y. M. (BR-SOV/2309)	A-3

Author	Page
Reynst, F. H.	804
Rezino, M. G.	798
Ribaud, G.	832
Riznichenko, Yu. V.	784
Riznik, G. A.	787
Rode, T. V.	779
Rokhlin, E. M.	771
Romanov, A. A.	822
Romanovskiy, V. B.	798
Ros, F. A.	787
Rozanov, V. G.	809
Rozengart, M. I.	790
Rozhavskiy, G. S.	768
Rozovskiy, Yu. A.	798
Rudik, P. A.	760
Rudorff, W.	779
Ruschmann, G.	785
Rutberg, R. A.	762
Rytov, S. M.	799
Sachkov, V. F.	B-1
Sakuyama, S.	777
Salikhov, S. G.	827
Samoylovich, A. G.	830
Sator, A.	778
Savinfsev, P. A.	830
Sayfullin, R. S.	780
Shanderl, H.	768
Schepers, A.	807
Schleicher, F.	817
Schmidt, F. R.	787
Schmidt, G.	812
Schmidt, H. W.	790
Schneider, K.	805
Schnell, H.	813
Schrader, B.	830
Schubert, G.	763
Schulz, W.	769
Schultz-Grunow, F.	832
Schwabe, K.	779
Schwiezer, R.	814
Schwen, G.	812
Semiletov, S. A.	830
Sergel', O. S.	765
Sergiyeva, A. P.	782
Shabanskiy, V. P.	831
Shamayev, Yu. M.	775
Shamina, O. G.	784
Sharonov, V.	760
Shchegoleva, T. A.	772
Shcherbakov, G. V.	787
Shenk, N. A.	764
Shestakov, V. I.	779
Shevchenko, V. B.	B-2
Shevlyakov, A. S.	791
Shih, G.	781
Shilov, M. N.	765
Shimamura, T.	766
Shirayeva, L. V.	B-2
Shirkov, D. V.	831
Shishova, D. P.	770
Shklyar, I. V.	784
Shmarayev, G. E.	759
Shostakovskiy, M. F.	773
Shtrafun, Ya. N.	798
Shuykin, N. I.	780
Shvetsova, Z. N.	790
Sick, H. H.	779
Siebe, P.	823
Sigov, A. A.	822
Sittard, J.	820
Skwarski, T.	773
Sladkova, M. V. (BR-SOV/2285)	A-2
Slepneva, A. T.	771
Slobodyannikov, S. S. (BR-SOV/2261)	A-2
Smelov, V. S.	B-2
Smirov, M. V.	B-3
Smirnov, V.	788
Smolina, L. P.	780
Smolyarenko, D. A.	808
Sogomonyants, Zh. S.	B-3
Sokolov, N. I. (BR-SOV/2309)	A-3
Sokolov, N. N. (BR-SOV/2272)	A-2
Sokurskii, Yu. N.	B-3
Sollogub, V. B.	781
Soto Yarritu, F.	764
Spath, W.	809
Specht, H.	761
Stange, K.	791
Starcuk, Zenon	B-3
Staudenmayer, T.	768
Steckhan, O.	803
Stefanyuk, S. L.	770
Sterner-Rainer, R.	821
Stolov, A. I.	810
Stromilov, V. M. (BR-SOV/2309)	A-3
Strub, R. A.	B-3
Stukanovskaya, N. A.	777
Suchkov, A. K. (BR-SOV/2297)	A-2
Suhrmann, R.	779
Sutyagina, A. A.	776
Suzuki, S.	790
	791
Suzuki, Y.	763
Svenson, A. N.	783
Sviderskiy, Y. M. (BR-SOV/2297)	A-2
Sysoyeva, V. V.	807
Tadema, H. J.	791
Tafelmeier, H.	808
Takashima, S.	810
Tamura, G.	763
Tanizaki, Y.	813
Tararyshkin, M. Ye.	811
Tausson, T. A.	763
Teichmann, H.	828
Teng, K. -F.	765
Tennevin, J.	829
Teplov, L.	834
Terent'yev, D. F.	779
Tereshchenko, Ye. R.	811
Thiele, J.	773
Tietz, N.	822
Timofeyev, S.S.	798
Timofeyeva, Ye. A.	780
Tintner, G.	815
Tishchenko, N. T. (BR-SOV/2309)	A-3
Tokiura, S.	772
Tolmachev, Yu. M.	B-2
Tolmacheva, N. S.	B-3
Tolstopyatova, A. A.	773
Tomashov, N. D.	825
Tonn, W.	820
Topchiyev, A. V.	773
Toporkov, L.	781
Toptygin, D. Ya.	770
Trebin, F. A.	787
Trey, F.	792
Troytskiy, V. N.	826
Tsimbal, L. V.	773
Tsuneki, N.	762
Tsyganov, G. P.	782
T'ung, T. -c.	785
Turri, A.	826
Turskiy, Yu. I.	811
Tur'yan, Ya. I.	780
Tyuryayev, I. Ya.	773
Udalov, N. P. (BR-SOV/2309)	A-3
Udintsov, P. S.	759
Ulbrich, R.	814
Ulmer, H.	823
Umnik, N. N.	790
Umrikhin, P. V.	822
Uno, D.	823
Uno, K.	791
Usmanskiy, L. I.	760
Ustinov, M.	758
Vacek, A.	821
Varshavskiy, S. N.	765
Vasil'yev, T. Y.	B-3
Vaver, V. A.	772
Vavilov, V.	B-3
Vaynshteyn, L. A.	832
Vdovenko, V. M.	768
Vedenov, A. A.	832
Veksler, V. I.	826
Venikov, V. A.	798
Verchenko, V. P.	B-3
Vereshchagin, L. F.	773
Vermel', Ye. Ye.	773
Vetchinkin, V. P. (BR-SOV/2247)	A-1
Vey, V.	808
Vielmo, O.	809
Vipper, A. B.	811
Vishnyakov, A.	788
Vitkevich, V. V.	781
Vivell, O.	764
Vizun, Yu. I.	794
	798
Voelz, K.	818
Vogels, H. A.	823
Vol'kenshteyn, F. F.	831
Volker, A.	809
Vokersen, O.	817
Volkov, Ye. A.	816
Volodin, I.	788
Vonsovskiy, S. V.	827
Vorontsov, G. V.	817

Author	Page
Vorotilov, V. A. (BR-SOV/1917)	A-1
Voskobynikov, G. M.	B-3
Voytovetskiy, V. K.	B-3
Voytsik, L. R.	784
Vozdvizhenskiy, G. S.	780
Vyacheslavov, P. M. (BR-SOV/2293)	A-2
Wang, C. -k.	763
Weibull, G.	816
Welker, H.	831
Wicke, E.	775
Wiester, H. J.	823
Wietzel, G.	792
Wu. J. C.	792
Yakovlev, V. O.	B-3
Yakubov, M. K.	802
Yakubson, S. I.	768
Yamashita, Y.	766
Yamazaki, T.	792
Yankelev, L. F.	812
Yang, C. C.	783
Yelpat'yevskaya, G. N.	765
Yeremenko, V. S.	811
Yeremeyev, A. S.	796
	799
Yermanok, M. Z.	808
Yerozolimskiy, B. G.	784
Yetlis, V. S.	791
Yodin, M. F.	B-3
Yokota, S.	834
Yonezawa, M.	791
Yoshizawa, S.	778
Zagoruchenko, V. A.	780
Zamyatnin, M. M. (BR-SOV/2237)	A-1
Zaporets, A. V.	760
Zeml'yanoy, M. I.	799
Zhabotinskiy, M. E.	799
Zhukov, A. M.	817
Zhukov-Verezhnikov, N. N.	763
Ziegler, K.	774
Zimakov, I. E.	768
Zimmerlund, G.	775
Zingerman, Ya. P.	799
Zinov'yev, A. A.	780
Zippel, R.	803

SUBJECT INDEX

Subject	Page	Number
Abbreviated titles	757	59-21176
Accelerators		
--Development	826	59-17539
Acetylenes		
--Adsorption	789	ATS-16L34R
--Chemical reactions	772	ATS-93L33J
--Synthesis	775	59-20281
Acrolein		
--Synthesis	773	ATS-33L32R
Acrylates		
--Synthesis	790	ATS-89L33J
	791	ATS-90L33J
		ATS-91L33J
Adsorption		
--Theory	775	59-17317
	776	ATS-00L34F
Aerial cameras		
--Development	782	59-16321
Aerial targets		
--Detection	788	59-22205
--Interception	788	59-22201
Aerial warfare		
--Countermeasures	785	59-18779
	786	59-18778
	801	59-11779
Aerosols		
--Electrical properties	782	59-16022
--Therapeutic effects	759	59-18311
Agriculture		
--China	758	141 219T
--Latvia	759	59-18275
--Periodicals	759	59-13847
--USSR	758	59-11745
		59-11749
	759	59-19254
Air		
--Purification	789	ATS-16L34R
Air brakes		
--Effectiveness	809	59-18857
--Equipment	809	59-18788
Air shock	811	59-22202
Aircraft		
--Equipment	787	59-17672
--USSR	787	59-22192
Aircraft equipment		
--Design	787	59-19723
Aircraft industry		
--Rumania	787	59-12950
Airplane engines		
--Equipment	787	59-17690
Alcohols		
--Chemical reactions	773	ATS-45L33R
Algae		
--China	784	59-11788
--Culture	785	NRCC TT-802
		NRCC TT-803
		NRCC TT-804
Alkali metal halide crystals		
--Phase studies	830	59-20140

Subject	Page	Number
Alkali metal hydroxides		
--Production	778	59-17876
Alkali metals		
--Chemical reactions	779	59-17936
Alkaline earth metals		
--Chemical reactions	779	59-17936
Alkyl compounds		
--Production	790	59-20183
Alpha particles		
--Chemical effects	774	59-17961
Alumina-silica		
--Catalytic properties	777	ATS-51L33R
Aluminothermy	823	59-17943
Aluminum		
--Catalytic properties	790	59-20144
--Corrosion	825	59-20334
--Determination	767	ATS-14L30R
--Melting	821	59-20336
Aluminum alloys		
--Corrosion	825	59-20334
--Melting	821	59-20336
Aluminum-beryllium alloys		
--Hardening	823	59-20335
Aluminum castings		
--Production	821	59-20336
Aluminum compounds		
(Organic)	774	ATS-24L34G
--Chemical reactions	776	ATS-22L32G
Aluminum-magnesium alloys		
--Hardening	823	59-20335
Aluminum plating		
--Applications	824	59-15107
Aluminum-titanium alloys		
--Production	823	59-17943
Aluminum tubing		
--Production	808	59-18769
Amines		
--Catalytic properties	766	ATS-15L33J
Amino acids		
--Chemical reactions	801	59-20001
--Determination	768	59-20148
Amplifiers		
--Design	797	59-18289
Anemometers		
--Applications	817	59-17727
Anilines		
--Chemical reactions	792	59-17364
Antarctic regions	780	59-19820
Antibiotics		
--Physiological effects	759	59-20171
Anticorrosive coatings		
--Development	824	59-15107
Anticyclones		
--Asia	781	59-22197
Antimony		
--Determination	768	59-20009
Antimony compounds		
--Electrical properties	779	59-17962

Subject	Page	Number
Applied mathematics		
--Periodicals	815	JOURNAL
--USSR	815	JOURNAL
Applied mechanics		
--Periodicals	815	JOURNAL
--USSR	815	JOURNAL
Arctic regions	780	59-19820
Arsanilic acid		
--Preparation	771	59-17878
Arteries		
--Physiology	761	59-15612
Ascorbic acid		
--Metabolism	761	59-19246
Astronautics	760	59-22199
Astronomical observatories		
--USSR	800	59-16318
Atmosphere		
--Dielectric properties	826	59-18773
--Motion	782	59-22198
--Oscillation	782	59-16007
Atomic bomb explosions		
--Physical effects	782	59-11598
Atomic energy engineering		
--Bulgaria	826	59-16445
--Hungary	826	59-16639
Atomic research		
--Bulgaria	826	59-16445
--Hungary	826	59-16639
--Periodicals	825	141 082T-16 141 082T-18 141 082T-19 SOVIET
--USSR	825	141 082T-16 141 082T-18 141 082T-19 SOVIET
Austenite		
--Mechanical properties	821	BISITS-1451
--Temperature factors	821	BISITS-1451
Automotive industry		
--Periodicals	808	141 110T-15 141 110T-16
--USSR	808	141 110T-15 141 110T-16
Bacillus thuringiensis	762	59-15410
Barbituric acids		
--Synthesis	771	ATS-88L34R
Barium perchlorate-sodium perchlorate systems		
--Phase studies	780	59-19243
Bearings		
--Containers	805	59-18780
--Design	796	59-18639
Beta particles		
--Decay	826	59-12933
Beverages		
--Containers	801	59-22187
Bibliography		
--Dissertations	757	59-11782
--Meteorology	781	59-11616
--Periodicals	757	59-16450
--Plastics	813	RIS TB-180, sec. 1-4
--Psychological warfare	757	59-18425
--Scientific reports	757	59-11782
--Spaceships	757	59-19719
Billet segregation	819	59-20348
Biochemistry		
--Periodicals	761	BIOCHEMISTRY
--USSR	761	BIOCHEMISTRY
Biological warfare agents		
--Countermeasures	763	59-11275
Birds		
--Nutrition	765	59-18307
Bituminous coatings		
--Combustion	812	59-16989
Blood		
--Periodicals	761	PROBLEMS
Blood transfusions		
--Periodicals	761	PROBLEMS
Boilers		
--Cleaning	804	59-20085
--Heat transfer	804	59-21130
Bone		
--Blood circulation	761	59-15473
Boron compounds (Organic)		
--Chemical reactions	772	ATS-57L33R
--Synthesis	772	ATS-55L34R
Boron hydrides		
--Chemical reactions	772	ATS-55L34R
Brass		
--Processing	805	59-20223
Bromides		
--Chemical reactions	773	59-20275
Bubbles		
--Motion	777	ATS-30L33R
Butadienes		
--Chemical reactions	773	59-20275
Cadmium sulfide crystals		
--Electron transitions	828	59-17930
Calcium alloys		
--Properties	823	59-20332
Calcium gluconate		
--Preparation	764	59-17846
Calcium hydroxide		
--Analysis	810	59-17896
Capacitors		
--Excitation	798	59-18647
--Oscillation	798	59-18647
Capillary displacement	790	ATS-28L34R
Carbenes	771	ATS-40L32R
Carbide tools		
--Test results	805	HB-4596
Carbides		
--Separation	822	HB-4560
--Sintering	805	HB-4596
Carbon		
--Phase studies	778	59-17990
--Separation	821	59-20228
Carbon compounds		
--Synthesis	771	ATS-40L32R
Carbon dioxide		
--Adsorption	789	ATS-16L34R
Carbonates		
--Applications	813	RIS-61053
Carboxylic acids		
--Chemical reactions	773	59-15465
Cast steel		
--Fracture	822	HB-4633
Castings		
--Hardening	819	59-20348

Subject	Page	Number
Catalysis	777	ATS-88L33R
Catalysts		
--Effectiveness	773	ATS-44L30R
	779	ATS-33L33R
	780	59-20293
--Effects of radiation	777	59-17268
--Porosity	779	ATS-83L32R
--Surfaces	777	59-20294
	779	ATS-83L32R
--Temperature factors	779	ATS-33L33R
Cathodes (Electrolytic cell)	776	ATS-31L34R
Cathodes (Electron tubes)		
--Temperature	797	SCL-T-257
Cellulose		
--Processing	812	59-17843
Cellulose esters		
--Applications	813	59-17841
Cellulose ethers		
--Synthesis	773	59-20227
Cements		
--Chemical analysis	810	59-17896
--Periodicals	792	141 094T-8
--Production	792	141 094T-8
--USSR	792	59-19096
		141 094T-8
Ceramic materials		
--Periodicals	810	141 068T-15
--USSR	810	141 068T-15
Cerium oxides		
--Catalytic properties	773	ATS-45L33R
Cesium chloride-magnesium chloride systems		
--Phase studies	778	59-20180
Cesium isotopes (Radioactive)		
--Applications	777	59-20294
Chemical elements		
--Separation	768	MDF V-134
Chemical engineering		
--Periodicals	789	141 076T-3
--USSR	789	141 076T-3
Chemical equilibrium		
--Physical factors	776	59-18750
Chemical industry	792	59-12937
--Periodicals	788	141 058T-1
		141 059T-10
--USSR	788	141 058T-1
		141 059T-10
	806	59-19685
Chemical reactions		
--Analysis	775	ATS-11L31R
	776	ATS-22L32G
	777	MDF K-168
--Inhibition	775	59-20281
--Physical factors	776	59-18750
--Thermodynamic properties	772	AEC-tr-3734
--Velocity	773	ATS-44L30R
Chemical warfare agents		
--Countermeasures	763	59-11275
Chemistry		
--Periodicals	766	141 050T-4
		141 050T-6
		141 055T-17
		141 070T-17
Chemistry (Con.)		
--Periodicals (con.)	766	141 070T-18
		141 071T-9
		141 075T-18
		BULLETIN
		JOURNAL
		PROCEEDINGS
	770	141 074T-15
	788	141 057T-7
--USSR	766	141 050T-4
		141 050T-6
		141 055T-17
		141 070T-17
		141 070T-18
		141 071T-9
		141 075T-18
		BULLETIN
		JOURNAL
		PROCEEDINGS
	770	141 074T-15
Children-Nutrition	761	59-19246
Chlorides		
--Separation	770	59-18733
Chlorine		
--Chemical reactions	772	AEC-tr-3734
Chlortetracycline		
--Determination	802	59-18757
Chromium		
--Catalytic properties	779	ATS-83L32R
	790	59-20144
--Microvolumetric analysis	767	ATS-10L34P
--Passivity	777	ATS-25L33G
Chromium catalysts		
--Contamination	779	ATS-70L31R
Chromium oxides		
--Catalytic properties	773	ATS-96L32R
Civil aviation		
--USSR	782	59-11596
Civilian defense systems		
--USSR	801	59-11779
Clamps		
--Design	806	59-18286
	807	59-18287
Climate		
--Physical factors	782	59-11598
Clouds		
--Electrical properties	782	59-16022
Coal		
--Analysis	789	59-18382
--China	810	59-11462
--Magnetic properties	810	ATS-47L33R
--Processing	790	59-20043
	804	59-19249
	811	ATS-99L33R
--Thermal properties	789	59-18382
--USSR	783	ATS-73L32R
Coal tar		
--Chemical analysis	771	59-20056
		59-20057
		59-20058
Cobalt-iron-tungsten alloys		
--Properties	820	59-20229
Cobalt-iron-vanadium alloys		
--Analysis	819	59-20232

Subject	Page	Number
Cocoa butter		
--Substitutes	802	59-19158
Cold drawing	806	HB-4642
Colorimetry		
--Applications	768	59-18753
Combustion		
--Applications	791	59-20047
		ATS-97L33G
Combustion chambers		
--Test results	804	59-19249
Communication systems		
--Periodicals	793	141 099T-14
--USSR	793	141 099T-14
	786	59-22189
	809	59-19760
Complex compounds	774	ATS-24L34G
--Solvent extraction	767	59-13832
Complex variables		
--Applications	832	59-20283
Concrete		
--Applications	786	CEA-tr-X57
Condensation reactions	772	ATS-09L33J
		ATS-14L34J
	773	59-15465
Conductors		
--Electromagnetic properties	827	59-15210
Conferences	800	59-18772
Consistometer	776	59-20315
Construction		
--USSR	792	59-19096
Construction materials industry		
--Periodicals	792	141 090T-14
--USSR	792	59-13852
		141 090T-14
Convex bodies		
--Physical effects	833	59-20285
Copper		
--Catalytic properties	773	ATS-33L32R
--Conductivity	823	59-20333
--Machining	766	ATS-28L33R
Corrosion	824	59-20080
--Moisture factors	825	ATS-21L33R
Corrosion prevention oils		
--Development	824	59-20077
Crab-Nebula	759	59-20312
Crystal rectifiers		
--Theory	796	59-17941
Crystal structure		
--X-ray analysis	829	59-17909
Cybernetics		
--USSR	834	59-11770
Cyclic compounds		
--Polymerization	771	ATS-84L33R
Cyclohexylamine		
--Production	792	59-17364
Cyclotrons		
--Circuits	825	AEC-tr-3651
Cytology		
--Periodicals	762	59-13739
--USSR	762	59-13739
Detergents		
--Chemical reactions	811	ATS-76L31R
Devolatilization	790	59-20043
Dies		
--Design	805	59-20223
Diffusion		
--Theory	778	59-20135
Diodes		
--Theory	796	59-17941
Disks		
--Deformation	816	59-18663
Drilling machines		
--Development	786	59-18796
Drills		
--Friction	803	ATS-45L34R
Dyes		
--Absorption	811	ATS-34L34G
--Color	813	ATS-21L34J
--Photochemical reactions	812	ATS-49L33G
Earth		
--Reflective effects	760	59-20288
Education		
--USSR	757	59-11782
Electric cables		
--Insulation	795	59-17856
Electric currents		
--Corrosive effects	825	59-20344
Electric insulation		
--Materials	794	59-18655
Electric insulators		
--Materials	796	59-17855
		59-17857
Electric machinery		
--Equipment	803	59-18672
--Insulation	794	59-18655
--Magnetic properties	803	59-18638
--Periodicals	794	141 107T-15
		141 107T-16
--USSR	794	141 107T-15
		141 107T-16
Electric meters		
--Poland	792	59-18455
Electric motors		
--Applications	800	59-18661
--Electromagnetic effects	794	59-18654
--Electromagnetic properties	798	59-18648
--Insulation	796	59-18653
Electric motors (DC)		
--Design	804	59-18627
Electric power production		
--USSR	809	59-19760
Electrical conductance		
--Measurement	775	CCT-518TT
	823	59-20333
Electrical engineering		
--Periodicals	793	141 101T-1
		141 101T-4
		141 102T-2
--USSR	793	141 101T-1
		141 101T-4
		141 102T-2
Electrical equipment		
--Periodicals	793	141 083T-12
		141 098T-13
--USSR		141 083T-12
		141 098T-13
	806	59-19821

Subject	Page	Number
Electrical equipment (Airborne)		
--Design	787	59-19723
Electrical insulating tapes		
--Materials	795	59-17858
Electro-adsorption	776	ATS-00L34F
Electrochemistry	777	ATS-27L33G
	779	ATS-26L33G
Electrodes		
--Coatings	793	59-17107
--Materials	778	59-17876
Electrolysis		
--Equipment	775	59-18657
Electrolytes	776	ATS-31L34R
	777	ATS-27L33G
--Applications	822	HB-4560
--Conductivity	775	CCT-518TT
--Physical properties	774	ATS-79L33G
Electrolytic crystallization	829	CCT-234TT
Electrolytic polishing		
--Applications	807	59-20251
--Metallurgical effects	766	ATS-28L33R
	820	59-20141
Electrolytic tank	775	59-18657
Electromagnetic machines	803	59-17954
Electromagnetic waves		
--Diffraction	833	59-20285
--Mathematical analysis	832	59-20283
--Propagation	826	59-18773
	827	59-15210
	833	59-20286
Electron tubes		
--Performance	810	ATS-07L34G
Electronic equipment		
--Maintenance	795	59-13491
--Periodicals	793	141 106T-16
		141 106T-17
		RADIO
--Production	795	59-13491
--Theory	793	141 106T-16
		141 106T-17
		RADIO
--USSR	793	141 106T-16
		141 106T-17
		RADIO
	806	59-19821
Electrons		
--Energy	827	59-17553
Engineering		
--Periodicals	785	DIGEST
--USSR	785	DIGEST
Epidemiology		
--USSR	762	JOURNAL
Erbium oxide-uranium oxide systems		
--Phase studies	769	59-17956
Esterification	766	ATS-15L33J
Esters		
--Chemical reactions	773	59-15465
		59-20292
Ethyl bromides		
--Chemical analysis	768	59-17526
Ethylene glycols		
--Chemical reactions	773	59-15465

Subject	Page	Number
Ethylene polymers		
--Spectrographic analysis	767	ATS-14L30R
Ethylenes		
--Chromatographic analysis	767	ATS-96L33R
--Polymerization	773	ATS-96L32R
Expanded plastics		
--Materials	813	59-18288
Explosions	759	59-16965
Fats		
--Chemical properties	802	59-19158
Fatty acids		
--Synthesis	792	59-12937
Ferrocenes		
--Properties	772	59-21177
Fibers		
--Absorptive properties	811	ATS-34L34G
Fire alarm systems		
--France	793	59-15586
Fire chisel	786	59-18796
Fishes	801	59-20001
--Preservation	802	59-18757
Flames		
--Applications	786	59-18796
Fluid flow		
--Friction	818	59-17964
--Oscillation	818	59-17964
--Physical factors	818	59-17940
--Pressure	816	ATS-09L32R
Fluidized solids	775	59-20281
Fluids		
--Heat transfer	832	ATS-68L33G
Fluorescence		
--Excitation	774	59-17961
Flying saucers	757	59-19719
Food		
--Acceptability	801	59-20001
Foundries		
--Periodicals	805	141 130T-10
		141 130T-11
--USSR	805	141 130T-10
		141 130T-11
Fresnel diffraction	833	59-20285
Fruits		
--Processing	802	59-20157
Fuels		
--Periodicals	788	141 060T-11
	819	141 019T-11
--Specifications	810	59-22191
--USSR	788	141 060T-11
	810	59-22191
	819	141 019T-11
Functions		
--Applications	815	59-16733
Fungi		
--Analysis	814	59-20087
--Classification	802	59-20157
--Physiology	814	NRCC C-3108
Fungicides		
--Development	814	NRCC C-3099
Furnace scale	804	59-20084
		59-20085
Galanthamine		
--Therapeutic effects	764	59-18837

Subject	Page	Number
Gamma radiation		
--Chemical effects	771	59-20295
	777	59-17268
--Physiological effects	765	59-18831
Gas diffusion		
--Analysis	777	ATS-30L33R
Gas heating	821	59-20079
Gas turbines		
--Operation	800	59-18682
Gases		
--Chemical analysis	767	ATS-54L30R
--Chemical reactions	777	MDF K-168
--Physical effects	774	59-20290
		ATS-64L31R
--Pressure	777	59-18950
--Production	788	141 062T-9
--Separation	777	59-18950
--Solubility	777	ATS-30L33R
Gasoline		
--Properties	811	59-22193
Gels		
--Preparation	777	ATS-51L33R
--Surface properties	776	ATS-32L33G
--Temperature factors	776	ATS-32L33G
Generators		
--Control systems	798	59-18632
--Cooling	799	59-18636
--Design	795	59-18674
	796	59-18670
	797	59-18633
	799	59-18640
		59-18641
--Equipment	796	59-18639
--Performance	795	59-18634
--Production	798	59-18631
Generators (D. C.)		
--Applications	787	59-19723
--Design	793	59-17947
Genetics		
--Theory	762	59-13848
	763	59-13833
Geochemistry		
--Periodicals	783	141 002T-11
--USSR	783	141 002T-11
Geography		
--Periodicals	781	141 017T-4
Geology		
--Periodicals	781	141 017T-4
--USSR	781	141 017T-4
Geophysics	780	131 632-84
	783	ATS-20L34R
	784	ATS-24L32R
--USSR	781	59-11765
Germanium crystals		
--Test methods	830	59-18626
Glass		
--Electrolysis	810	ATS-07L34G
--Phase studies	810	59-17963
--Production	810	59-17091
Glycines		
--Chemical reactions	773	59-20292
Gold crystals		
--Growth	828	59-20036
Gold-nickel alloys		
--Hardening	820	59-20234
Gold-platinum alloys		
--Phase studies	824	59-20252
Graphite		
--Conductivity	776	59-17507
--Heat transfer	776	59-17507
Grasses		
--Periodicals	759	59-13847
Greases		
--Materials	811	59-19712
Gyro stabilizers		
--Design	797	59-21129
Harbors		
--China	784	59-11785
Hardness-Measurement	816	59-17965
Hay baler	758	59-17850
Heart		
--Surgery	761	59-15679
Heat drilling	786	59-18796
Heat power production		
--Periodicals	799	141 089T-16
--USSR	799	141 089T-16
Heat transfer		
--Physical factors	832	59-20075
Heavy water		
--Determination	783	ATS-13L34H
--Production	789	59-17523
Helvetius	763	59-15547
Hemorrhage		
--Analysis	761	59-15612
Heptanes		
--Chemical reactions	790	59-20144
Herbicides		
--Physiological effects	762	ATS-68L34R
Hexyne		
--Polymerization	772	ATS-11L33I
High altitude bombing	788	59-22207
Hydraulic brakes		
--Effectiveness	809	59-18857
Hydraulic fracturing	786	ATS-30L34R
Hydraulic power systems		
--Design	799	59-18792
Hydraulic systems		
--USSR	758	141 092T-14
		141 092T-15
Hydrides		
--Production	788	59-20184
--Thermal properties	788	59-20184
Hydrocarbons		
--Decomposition	777	59-20294
	790	59-20043
--Determination	771	59-20058
--Oxidation	771	59-12935
		59-20295
	792	59-12937
--Polymerization	771	ATS-84L33R
--Separation	790	ATS-28L34R
--Temperature factors	811	59-18454
Hydrogen fluoride-chromium oxide-water systems		
--Solubility	778	AEC-tr-3733
Hydrogenation		
--Temperature factors	780	59-20293
Hydrology		
--Periodicals	758	141 092T-14
		141 092T-15
	781	141 045T-16

Subject	Page	Number
Hydrology (Con)		
--Periodicals (con)	781	141 045T-17
		141 045T-18
		141 045T-19
--USSR	758	141 092T-14
		141 092T-15
	781	141 045T-16
		141 045T-17
		141 045T-18
		141 045T-19
Immunization		
--USSR	762	JOURNAL
Indium compounds		
--Electrical properties	779	59-17962
Induction machines	803	59-17954
Industrial equipment		
--USSR	802	59-19806
Industrial plants		
--Equipment	789	ATS-16L34R
--USSR	788	141 062T-9
	806	59-13781
Industrial production		
--Scheduling	815	59-20158
--Standards	807	59-15696
--USSR	806	59-13781
		59-19685
		59-19821
Industrial psychology	760	59-20424
Infrared filters		
--Development	827	59-18768
Infrared spectra		
--Analysis	827	ATS-77L33R
Insecticides		
--Development	801	59-17094
Instruments		
--Periodicals	834	141 112T-11
--USSR	834	141 112T-11
Insulation		
--Materials	812	59-16989
--Moisture content	795	59-18652
	797	59-18651
Intercalation compounds	779	59-17936
Internal combustion engines		
--Equipment	805	59-20314
International Geophysical Year	780	131 632-84
	781	59-11765
Interrogation techniques	757	59-18425
Inventions		
--Periodicals	805	141 014T-7
		141 014T-8
--USSR	805	141 014T-7
		141 014T-8
Inverse billet segregation	819	59-20348
Ionophoresis	762	ATS-23L34J
Ionosphere		
--Electromagnetic effects	833	59-20286
--Electromagnetic properties	781	59-18739
Ions		
--Determination	768	ATS-09L34P
Iron		
--Casting	807	HB-4272
--Heat treatment	821	59-20228
Iron carbides		
--Synthesis	821	59-18329
Iron catalysts		
--Chemical effects	770	ATS-87L33R
Iron chlorides		
--Solubility	770	59-18733
Iron industry	760	59-20424
--Germany	820	59-17298
Iron-nickel alloys		
--Electrodeposition	807	59-20317
Iron ores		
--Processing	820	59-17298
	822	HB-4640
--Sintering	822	HB-4640
Jam	802	59-20157
Jelly	802	59-20157
Jet engines		
--Design	787	59-18787
Kallikrein		
--Production	764	59-17840
Ketones		
--Determination	771	59-20057
Kombi chamber	789	ATS-38L33G
Kutzbach method	818	59-17724
Lactobacillus		
--Culture	763	59-20296
Latour system	793	59-17947
Laue method	829	59-17909
Lead		
--Corrosion	825	59-20344
Lead chlorides		
--Conductivity	778	59-17946
Lead-compounds		
--Chemical analysis	768	59-20009
Light		
--Polarization	760	59-20288
Liquid level control		
--Equipment	801	59-22187
Liquid metals		
--Diffusion	778	59-20135
Liquids		
--Containers	801	59-22187
--Separation	775	59-20164
Lithium compounds		
--Properties	769	59-17958
Lithium compounds (Organic)		
--Spectra	827	ATS-77L33R
Liver extract		
--Preparation	764	59-17861
Low altitude bombing	787	59-22204
Lubricant additives		
--Chemical reactions	811	ATS-76L31R
Lubricating oils		
--Materials	811	59-19712
--Stability	811	59-22202
Machine tools		
--Periodicals	805	141 116T-14
--USSR	805	141 116T-14
Machines		
--Design	803	59-19226
--Performance	803	59-17954
--Theory	800	59-18772
Magnesium chloride-rubidium chloride systems		
--Phase studies	778	59-20180

Subject	Page	Number
Magnetic cores		
--Production	794	59-18766
--Testing equipment	798	59-18770
Magnetic fields		
--Countermeasures	803	59-18638
Magnetic resonance		
--Measurement	810	ATS-47L33R
Magneto-hydrodynamic waves		
--Analysis	832	59-20291
--Theory	831	MDF K-191
Manganese dioxide		
--Crystal structure	829	59-20039
Mapping		
--Periodicals	783	141 001T-16
--USSR	783	141 001T-16
Marine biology	814	NRCC C-3108
--China	784	59-11788
		59-11789
	785	59-11783
		59-11790
Marine geology	784	59-11787
Marius Latour system	793	59-17947
Materials		
--Mechanical properties	809	59-20059
--Standards	809	59-20059
--USSR	806	59-19685
Mathematical computers		
--Coding	816	59-18764
Mathematics		
--Periodicals	774	141 018T-5
		141 018T-6
	815	141 033T-17
		141 037T-5
		141 037T-6
--USSR	815	141 033T-17
		141 037T-5
		141 037T-6
Matrix algebra	815	Gantmacher
Measurement		
--Instrumentation	798	59-18631
	834	141 112T-11
Meat		
--Processing	802	59-20297
Mechanical engineering	800	59-18772
Mechanics		
--Periodicals	816	141 124T-17
		141 124T-18
		141 124T-19
--USSR	816	141 124T-17
		141 124T-18
		141 124T-19
Medical personnel		
--France	763	59-15547
Melamine		
--Production	790	ATS-37L34R
--Properties	790	ATS-37L34R
Mercury		
--Spain	787	CEA-tr-X119
Metal coatings		
--Optical properties	776	ATS-34L33R
--Production	807	59-20317
Metal sulfides		
--Chemical reactions	779	59-17936
Metallic crystals		
--Crystals structure	776	ATS-34L33R
Metallic crystals (Con)		
--Deformation	819	ATS-98L32G
Metallurgy		
--Periodicals	819	141 019T-11
		141 027T-19
		141 131T-13
		141 140T-17
		141 140T-18
		141 140T-19
		SOVIET
	823	141 139T-16
--USSR	806	59-19685
	819	141 019T-11
		141 027T-19
		141 140T-17
		141 140T-18
		141 140T-19
		SOVIET
	823	141 139T-16
Metalorganic compounds		
--Polymerization	771	ATS-47L34R
--Synthesis	771	ATS-47L34R
Metals		
--Adsorptive properties	775	59-17317
--Corrosion	824	59-20080
--Crystallization	824	59-20230
--Electrodeposition	776	ATS-34L33R
--Impurities	768	MDF N-106
--Machining	820	59-20141
--Magnetic properties	827	59-17553
--Mechanical properties	816	59-17965
--Melting	819	HB-4365
--Passivity	777	ATS-22L33G
Meteorological instruments		
--Design	782	59-16022
		SCL-T-232
Meteorological radar		
--Applications	782	59-11596
Meteorology		
--Bibliography	781	59-11616
--Periodicals	781	141 045T-16
		141 045T-17
		141 045T-18
		141 045T-19
--USSR	781	59-11616
		141 045T-16
		141 045T-17
		141 045T-18
		141 045T-19
Methanes		
--Combustion	775	59-20281
--Oxidation	771	59-20295
--Vapor pressure	780	ATS-76L33R
Methionine (Labeled)		
--Chemical reactions	764	59-13227
Methyl acrylate		
--Synthesis	772	ATS-93L33J
Microbiology		
--USSR	762	JOURNAL
Microorganisms		
--Biochemical effects	802	59-20297
--Culture	763	59-19084
--Genetic factors	763	59-13833
Military personnel		
--Angola	834	59-12010
		59-12011

Subject	Page	Number
Mine shafts	786	CEA-tr-X57
Mining engineering	786	ATS-30L34R
		CEA-tr-X57
--Equipment	786	59-18796
--Periodicals	785	141 135T-15
--Spain	787	CEA-tr-X119
--USSR	785	141 135T-15
Missiles		
--USSR	800	59-19725
Mixtures		
--Chromatographic analysis	767	ATS-96L33R
--Preparation	791	59-20132
--Separation	790	59-18628
Molds		
--Enzymes	761	59-20147
Molecular rectification	790	59-18628
Molecular stills	790	59-18628
Mollusca		
--Standards	802	59-20179
Moon	760	59-22199
--Reflective effects	760	59-20288
Motor reactions		
--Theory	760	59-13840
Movable slot burners	804	59-19249
Multiple cropping	758	141 219T
Natural gas		
--Applications	800	59-18682
Neoplasms		
--Analysis	763	59-17927
--Therapy	763	59-17926
Nickel		
--Electrodeposition	780	ATS-29L33R
--Machining	766	ATS-28L33R
--Passivity	779	ATS-23L33G
Nickel carbonyls		
--Chemical reactions	790	ATS-89L33J
	791	ATS-90L33J
		ATS-91L33J
Nickel hydroxides		
--Precipitation	774	59-20257
Nickel oxides		
--Phase studies	780	59-18751
Night flight	787	59-22204
Niobium carbides		
--Physical effects	805	HB-4596
Niobium oxides		
--Halogenation	770	RIS R-762
Nitrocellulose plasticizers		
--Analysis	812	59-20231
Nitrogen		
--Applications	823	BISITS-1431
--Separation	821	59-20228
Nuclear physics		
--Bulgaria	826	59-16445
--Hungary	826	59-16639
--USSR	826	141 052T-15
		141 052T-16
Nuts (Mechanics)		
--Stabilization	803	59-18672
Obstacles		
--Applications	785	59-18779
	786	59-18778
Ocean bottom		
--Analysis	784	59-11787
Oceanography		
--China	784	59-11785
		59-11786
	785	59-11784
Oils		
--Aging	811	ATS-12L31R
--Chemical properties	802	59-19158
--Periodicals	788	141 060T-11
--Test methods	811	ATS-12L31R
--USSR	788	141 060T-11
Optics		
--Periodicals	827	OPTICS
--USSR	827	OPTICS
Organic compounds		
--Chemical reactions	771	59-19882
Oscillations		
--Analysis	818	59-17724
Ovaries		
--Effects of radiation	765	59-18831
Oxide cathodes		
--Thermal properties	799	59-18509
Oximes		
--Preparation	770	59-17891
Oysters		
--Norway	765	59-17694
Packaging	803	59-19226
--Design	801	59-17823
Paper		
--Coatings	795	59-17858
--Mechanical properties	814	59-20220
--Production	815	59-20100
Paper capacitors		
--Dielectric properties	797	59-18756
Paper chromatography		
--Applications	762	ATS-22L34J
Paper ionophoresis	762	ATS-23L34J
Parachutes		
--Design	826	59-17684
Paramagnetic relaxation	827	59-17553
Particles		
--Energy	831	Bogolyubov
Pentanes		
--Dehydrogenation	780	59-20293
Periodicals		
--Bibliography	757	59-16450
--China	757	59-16450
--USSR	757	59-21176
Peroxides (Organic)		
--Chemical reactions	771	59-12935
Petroleum		
--Chemical reactions	784	ATS-25L34R
--Decomposition	789	ATS-95L33R
--Processing	789	ATS-38L33G
	790	ATS-36L34R
--Production	791	ATS-97L33G
	792	ATS-44L34G
--Recovery	786	ATS-20L31R
	791	59-20047
--Sources	783	ATS-13L34H
		ATS-71L31R
--USSR	783	ATS-73L32R
Petroleum industry		
--Equipment	793	141 083T-12
--Periodicals	788	141 085T-14
--USSR	788	141 085T-14
	789	59-22195

Subject	Page	Number
Pharmacology		
--Periodicals	764	PHARMACOLOGY
--USSR	764	PHARMACOLOGY
Phenols		
--Applications	801	59-17094
Phosphate coatings		
--Applications	806	HB-4642
Phosphorus compounds (Organic)		
--Microwave spectra	773	ATS-26L34R
Photographic film		
--Preparation	834	59-17867
--Production	813	59-18284
Photography		
--Periodicals	812	141 073T-7
--USSR	812	141 073T-7
Photometers		
--Design	828	59-20249
Photosynthesis	762	ATS-68L34R
Physical chemistry		
--Periodicals	774	141 018-5
		141 018T-6
		141 072T-17
		COLLOID
		PROCEEDINGS
--USSR	774	141 072T-17
		COLLOID
Physics		
--Periodicals	766	141 050T-4
		141 050T-6
	826	141 041T-16
		141 052T-15
		141 052T-16
		BULLETIN
	831	141 049T-15
		141 049T-16
--USSR	766	141 050T-4
		141 050T-6
	826	141 041T-16
		141 052T-15
		141 052T-16
		BULLETIN
	831	141 049T-15
		141 049T-16
Pipes		
--Production	807	HB-4272
--Salvage	786	59-18294
Pistons		
--Design	805	59-20314
--Materials	805	59-20314
Plants		
--Chemical analysis	762	ATS-22L34J
		ATS-23L34J
--Pathology	759	59-18275
--Physiology	762	ATS-68L34R
Plasma substitutes		
--Chemical analysis	764	59-13227
Plastic films		
--Color	813	ATS-21L34J
--Preparation	813	59-17841
Plastic flow		
--Analysis	819	ATS-98L32G
Plasticity		
--Theory	817	59-16786
Plastics		
--Bibliography	813	RIS TB-180, sec. I-4
Plastics (Con)		
--Development	813	RIS-61053
--Molding	813	59-18784
--Polarographic analysis	767	59-20008
Plow	758	59-18296
Poisonous gases		
--Detection	792	59-11791
Poliomyelitis		
--Therapy	764	59-18837
Polymers		
--Decomposition	774	59-20290
		ATS-64L31R
--Electrical properties	776	ATS-42L33G
--Halogenation	772	ATS-62L31R
--Isomerism	770	59-17986
--Molecular structure	772	ATS-11L33I
--Synthesis	772	ATS-09L33J
		ATS-11L33I
		ATS-14L34J
Porous materials		
--Heat transfer	832	NRCC TT-801
Porphyrins		
--Biochemical effects	763	59-17927
--Therapeutic effects	763	59-17926
Potassium silicates		
--Preparation	769	59-17306
Power plants		
--Periodicals	799	141 084T-17
--Rumania	800	59-18682
--USSR	795	59-18634
		59-18674
	796	59-18639
		59-18670
	797	59-18633
	798	59-18632
	799	59-18636
		59-18640
		59-18641
		141 084T-17
Pressure		
--Chemical effects	773	59-20292
	776	59-18750
--Physical effects	790	ATS-28L34R
Propanes		
--Dehydrogenation	773	ATS-44L30R
--Oxidation	771	ATS-16L33R
Propanols		
--Chemical reactions	770	ATS-87L33R
Propenes		
--Oxidation	773	ATS-33L32R
--Polymerization	772	ATS-62L31R
Properdin		
--Physiological effects	762	ATS-98L33R
Proteases		
--Biochemical effects	761	59-20147
Proteins		
--Chemical reactions	764	59-13227
--Decomposition	761	59-20147
Psychological warfare		
--Bibliography	757	59-18425
Psychology	834	59-20154
--USSR	760	59-11778
Psychomotor tests		
--Applications	760	59-13841
Psychoses		
--Therapy	764	59-15885

Subject	Page	Number
Pulse generators		
--Applications	784	ATS-67L29R
Pumping down	790	ATS-06L34G
Pumps		
--Equipment	800	59-18661
Pyrazolones		
--Color	813	ATS-21L34J
Pyrimidines		
--Synthesis	770	59-20129
Quantum mechanics	831	Bogolyubov
	832	59-20283
Radiation sickness		
--Therapy	765	59-11771
Radio astronomy	759	59-20312
--Applications	781	59-18739
Radio communication systems		
--Control systems	794	59-11609
Radio waves		
--Propagation	793	141 106T-16
		141 106T-17
		RADIO
Radioisotopes		
--Therapeutic effects	763	59-20165
Railroads		
--USSR	809	59-22208
Raman spectroscopy		
--Applications	830	ATS-44L33G
Rare earths		
--Halogenation	772	AEC-tr-3734
Rare earths-uranium oxide systems		
--Phase studies	768	59-17959
	769	59-17956
Raven	765	59-18307
Reactors		
--USSR	825	59-19715
		59-19718
Redundancy	815	59-16733
Refractory materials		
--Melting	819	HB-4365
--Periodicals	810	141 134T-16
		141 134T-17
--USSR	810	141 134T-16
		141 134T-17
Refrigeration systems		
--Periodicals	785	141 061T-2
		141 061T-3
--USSR	785	141 061T-2
		141 061T-3
Reliability		
--Mathematical analysis	815	59-16733
Reserpine		
--Therapeutic effects	764	59-15885
Resin acids		
--Molecular structure	775	NRCC TT-785
--Surface tension	775	NRCC TT-785
Respiratory diseases		
--Pathology	764	59-14624
Riveted joints		
--Stresses	817	59-17689
Rivets		
--Stresses	817	59-17689
Road sanders		
--Equipment	803	59-19218
Rock		
--Catalytic properties	784	ATS-25L34R
--Heat treatment	792	ATS-44L34G
--Mechanical properties	784	59-19248
		ATS-19L34R
Rotating structures		
--Heat transfer	803	59-20149
Rubber coatings		
--Applications	795	59-17858
Rubidium isotopes (Radioactive)		
--Applications	827	ATS-97L32G
Salts		
--Adsorption	775	59-17317
Satellite vehicle research	780	131 632-84
Satellite vehicle trajectories		
--Tables	800	59-11510
Satellite vehicles		
--USSR	800	59-16318
		59-19725
Scale removal	824	59-20080
Scheduling		
--Theory	815	59-20158
Science		
--Periodicals	757	59-16450
		59-21176
	833	141 015T-31
		141 015T-32
		141 015T-33
		141 015T-34
		141 016-15
--USSR	833	141 015T-31
		141 015T-32
		141 015T-33
		141 015T-34
		141 016T-15
Scientific reports		
--Bibliography	757	59-11782
Scientific research		
--China	834	131 891T-26
		131 891T-27
		131 891T-29
		131 891T-31
--Periodicals	833	141 026T-2
		141 026T-3
--USSR	833	59-22190
		59-22203
		141 026T-2
		141 026T-3
	834	131 891T-26
		131 891T-27
		131 891T-29
		131 891T-31
--Yugoslavia	834	131 891T-26
		131 891T-27
		131 891T-29
		131 891T-31
Sea water		
--Chemical analysis	784	59-11786
Seals		
--Development	777	ATS-88L33R
Selenium rectifiers		
--Electrical properties	797	59-17942
Semi-coking	811	ATS-99L33R
Semiconductors		
--Adsorptive properties	831	MDF V-135

Subject	Page	Number
Semiconductors (Con)		
--Development	829	59-18754
--Electrical properties	829	59-18644
--Electron transitions	828	59-17931
		59-18679
		59-18680
		59-18681
	831	59-18683
--Impurities	768	MDF N-106
	830	59-18645
--Properties	831	59-17960
--Surface properties	831	MDF V-135
--Theory	830	59-18645
Sewing machines		
--Design	803	59-17929
Shafts		
--Heat transfer	803	59-20149
Shanghai-57-1	808	HB-4668
Shaped charges		
--Applications	786	59-18294
Sheets		
--Cleaning	804	59-20084
--Hydrodynamic characteristics	818	59-18755
--Stresses	817	59-17711
Silicon compounds (Organic)		
--Applications	794	59-18655
--Properties	811	59-19712
Silver crystals		
--Growth	829	CCT-234TT
Single crystals		
--Phase studies	829	59-20039
Skull		
--Measurement	761	59-15606
Social sciences		
--Angola	834	59-12010
		59-12011
Sodium carbonates		
--Chemical reactions	774	59-20257
Sodium chloride		
--Separation	766	ATS-15L33J
Sodium chloride crystals		
--Temperature factors	829	59-20035
Sodium hydroxides		
--Chemical reactions	774	59-20257
Sodium salicylate		
--Applications	768	ATS-09L34P
Solid electrolytes	775	CCT-518TT
Solids		
--Spectrographic analysis	830	ATS-44L33G
--Vibration	818	59-17870
Solutions		
--Luminescence	774	59-17961
Space perception		
--Theory	760	59-13843
Spaceships		
--Bibliography	757	59-19719
Spectroscopy		
--Periodicals	827	OPTICS
--USSR	827	OPTICS
Spermatogenesis		
--Effects of radiation	765	NRCC TT-800
Spray nozzles		
--Design	803	59-19218
Spray tanks		
--Equipment	808	59-18292

Subject	Page	Number
Stability		
--Mathematical analysis	817	59-18737
Steam		
--Applications	824	59-20080
--Separation	789	59-17479
Steam cleaning		
--Applications	804	59-20084
		59-20085
Steel		
--Coatings	779	ATS-26L33G
--Electrochemistry	779	ATS-26L33G
--Hardening	807	59-20050
	821	59-18329
--Impurities	822	HB-4560
--Physical properties	822	AEC-tr-3613
--Production	823	BISITS-1431
--Welding	807	ATS-01L34G
	808	HB-4668
Steel castings		
--Heating	821	59-20079
--Production	821	59-20079
	822	HB-4610
--Test methods	787	59-17672
--Vibration	822	HB-4610
Steel industry	760	59-20424
	820	HB-4645
	821	HB-4644
--USSR	808	59-11602
Steel wire		
--Mechanical properties	816	59-20233
Stellar eclipses		
--Analysis	759	59-20312
Stirrers		
--Design	789	ATS-15L34G
Stochastic linear programming	815	59-20158
Straw		
--Processing	758	59-17850
Strontium isotopes (Radioactive)		
--Applications	827	ATS-97L32G
Structures		
--Load distribution	817	59-18737
--Stability	817	59-18737
--Thermal insulation	812	59-16989
--USSR	792	59-19096
Styrene polymers		
--Production	791	59-15757
Sulfates		
--Determination	767	ATS-10L34P
Sulfides		
--Oxidation	790	ATS-36L34R
--Separation	790	ATS-36L34R
Sulfonic acids		
--Determination	767	59-20010
Sulfur compounds (Organic)		
--Determination	767	ATS-54L30R
Sulfur dioxide		
--Oxidation	779	ATS-33L33R
Sulfuric acid		
--Chemical effects	777	ATS-25L33G
--Determination	767	59-20010
Surface-active agents		
--Chemical effects	777	ATS-30L33R
Swine		
--Physiology	759	59-20171

Subject	Page	Number
Swivel plow	758	59-18296
Synthetic fibers		
--Microstructure	812	59-15777
--Production	812	59-17843
		ATS-35L34G
		ATS-69L33G
Synthetic rubber		
--USSR	814	59-15351
Synthetic waxes		
--Oxidation	763	59-19084
Tagansay	781	59-16316
Tantalum carbides		
--Physical effects	805	HB-4596
Tantalum hydrides		
--Properties	769	RIS R-765
Tectonophysics	783	ATS-20L34R
	784	ATS-24L32R
Telegraph equation	799	ATS-81L33R
Telemeter systems		
--Applications	783	ATS-28L31R
--Equipment	792	59-18455
Telephone communication systems		
--Development	794	59-15883
Terpenes		
--Synthesis	761	59-20134
Textiles		
--Processing	812	ATS-49L33G
Thermocouples		
--Calibration	832	CEA-tr-A572
Thiols		
--Metabolism	762	59-14277
Thorium hydrides		
--Phase studies	769	59-20131
Three dimensional photography	834	59-17867
--Equipment	813	59-18284
Ticks		
--China	765	59-15726
--Development	765	59-15898
Titanium		
--Determination	767	ATS-14L30R
Titanium borides		
--Production	769	59-17957
Titanium chlorides		
--Chemical effects	770	59-18733
Titanium oxides		
--Halogenation	770	RIS R-762
--Reduction	823	59-17943
Torque		
--Analysis	805	59-17833
Towers (Chemistry)		
--Design	789	59-17523
--Equipment	789	59-17479
Tractors		
--Equipment	758	59-18296
Trailers		
--Equipment	809	59-18857
Transformer oils	811	ATS-12L31R
Transformers		
--Insulation	795	59-18652
	797	59-18651
--Moisture factors	795	59-18652
	796	59-18650
	707	59-18651

Subject	Page	Number
Transistors		
--Theory	796	59-17941
Translations	834	59-20154
Transmission lines		
--Operation	798	59-18643
Transmissions		
--Design	809	59-18293
Transportation		
--USSR	786	59-22189
	809	59-19760
Tunguska phenomenon	759	59-16965
Turbojet engines		
--Fuel consumption	804	59-17933
Turbopropeller jet engines		
--USSR	787	59-22192
Turbulent flow		
--Measurement	817	59-17727
Turri 43	826	59-17684
Ultrasonic radiation		
--Physical effects	819	ATS-98L32G
Underground combustion	791	59-20047
		ATS-97L33G
Underground explosions	781	59-16316
Universal joints		
--Mechanical properties	805	59-17833
Uranium oxides	825	ATS-08L33G
Urethane polymers		
--Applications	813	59-18288
Vacuum furnaces		
--Applications	819	HB-4365
Vacuum systems		
--Performance	790	ATS-06L34G
Valves		
--Design	808	59-18292
	809	59-18788
--Performance	787	59-17690
Varga process	789	ATS-38L33G
Veterinary medicine		
--Equipment	759	59-18311
Vibration		
--Physical effects	822	HB-4610
Vinegar		
--Chemical analysis	768	59-20148
Vinyl polymers		
--Processing	812	ATS-69L33G
--Synthesis	773	59-20227
Virus diseases		
--Pathology	764	59-14624
Viscosimeters		
--Design	776	59-20315
Vocabulary		
--Standards	834	59-20154
Vulcanization		
--Equipment	814	59-18948
Wages		
--Analysis	807	59-15696
Washing machines		
--Design	803	59-18290
Waste gases		
--Analysis	790	ATS-89L33J
--Cleaning	820	HB-4645
	821	HB-4644
Water		
--Applications	790	ATS-28L34R
--Chemical analysis	783	ATS-13L34H
--Determination	783	ATS-71L31R

Subject	Page	Number
Water (Con)		
--Heat transfer	832	AEC-tr-3527
--Separation	789	59-17479
Water supplies		
--USSR	758	141 092T-14
		141 092T-15
Water-wheel generators	795	59-18634
		59-18674
	796	59-18639
		59-18670
	797	59-18633
	798	59-18631
		59-18632
	799	59-18636
		59-18640
		59-18641
Waveguides		
--Theory	793	141 106T-16
		141 106T-17
		RADIO
Weather forecasting		
--China	783	59-13528
Wear	809	59-20059
Welding		
--Electrodes	808	HB-4668
--Periodicals	805	141 125T-16
		141 125T-17
	806	141 138T-17
		141 138T-18
--USSR	805	141 125T-16
		141 125T-17
	806	141 138T-17
		141 138T-18
Welds		
--Physical properties	807	ATS-02L34I
--Tensile properties	807	ATS-01L34G
--X-ray analysis	807	ATS-02L34I
Well logging	787	ATS-21L31R
--Control systems	783	ATS-28L31R
--Equipment	784	ATS-67L29R
Wheat		
--Genetic factors	762	59-20152
Wings		
--Supersonic characteristics	817	CCT-228TT
Wiring diagrams		
--Mathematical analysis	794	59-18659
	798	59-18658
Wood		
--Fungus deterioration	814	59-20087
		NRCC C-3099
		NRCC C-3108
Wood pulp		
--Dehydration	815	59-20100
Wrenches		
--Design	803	59-18672
Xanthines		
--Separation	762	ATS-22L34J
		ATS-23L34J
Xenon isotopes (Radioactive)		
--Diffusion	825	ATS-08L33G
Yeasts		
--Culture	763	59-19084
Zirconium		
--Determination	768	59-18753
Zirconium borides		
--Production	769	59-17957
Zymosan		
--Production	762	ATS-98L33R
--Properties	762	ATS-98L33R

JOURNAL INDEX

Journals marked with an asterisk are translated cover to cover.

Journal	Page
*Abstracts of Soviet Medicine	C-1
Academie des Sciences, Paris. Comptes Rendus (France)	
1949, v. 228, no. 23 p. 1773-1775	760
1951, v. 233, no. 14, p. 745-747	823
1952, v. 234, no. 1, p. 113-115	828
1952, v. 234, no. 3, p. 345-347	829
1952, v. 234, no. 3, p. 347-349	829
1952, v. 234, no. 19, p. 1883-1885	778
1953, v. 236, no. 12, p. 1275-1278	774
1956, v. 242, no. 15, p. 1849-1852	759
1958, v. 247, no. 17, p. 1418-1420	762
Accademia Nazionale dei Lincei. Classe di Scienze Fiziche, Matematiche e Naturali. Rendiconti (Italy)	
1951, ser. 8, v. 11, no. 5, p. 265-267	774
Acta Crystallographica (Denmark)	
1949, v. 2, no. 3, p. 133-138	829
Acta Metallurgica (U.S.)	
1959, v. 7, p. 305-318	B-2
Actas Luso-Espanolas Neurologico-Psiquiatras (Spain)	
1957, v. 16, no. 4, p. 305-307	764
Akademiya Nauk Armyanskoy SSR, Yerevan. Izvestiya, Seriya Geologicheskikh i Geograficheskikh Nauk	
1958, v. 11, no. 5, p. 3-68	781
Akademiya Nauk Estonskoy SSSR. Izvestiya. Seriya Tekhnicheskikh i Fiziko-Matematicheskikh Nauk	
1959, no. 1, p. 3-67 and suppl. p. 1-16	774
1959, no. 2, p. 71-138	774
Akademiya Nauk Kazakhskoy SSR, Alma Ata. Vestnik	
1959, no. 1, v. 15, p. 3-108	833
1959, no. 2, v. 15, p. 3-123	833
Akademiya Nauk SSSR. Doklady	
1952, v. 85, p. 1111	B-1
1954, v. 96, no. 4, p. 717-179	827
1956, v. 107, no. 5, p. 685-688	821
1956, v. 109, no. 4, p. 828-831	790
1957, v. 116, no. 3, p. 373-376	818
1957, v. 117, no. 4, p. 655-657	780
1958, v. 119, no. 3, p. 523-525	772
1958, v. 119, no. 4, p. 716-719	790
1958, v. 119, no. 5, p. 936-937	830
1958, v. 120, no. 5, p. 984-986	831
1958, v. 121, no. 5, p. 855-857	830
1958, v. 121, no. 6, p. 1019-1020	778
1958, v. 122, no. 3, p. 424-427	820
1958, v. 122, no. 6, p. 1076-1078	791
1958, v. 123, no. 6, p. 1041-1043	772
1959, v. 124, p. 328-330	B-1
1959, v. 124, no. 3, p. 583-585	790
1959, v. 124, no. 3, p. 625-627	779
1959, v. 124, no. 4, p. 842-845	773
1959, v. 124, no. 4, p. 873-875	827
1959, v. 124, no. 6, p. 1183-1376	833
1959, v. 125, no. 2, p. 247-464	833
1959, v. 125, no. 3, p. 471-687	833
1959, v. 125, no. 4, p. 931-934	762
1959, v. 125, no. 6, p. 1219-1222	B-3
1959, v. 126, no. 1, p. 126-129	B-1
1959, v. 126, no. 2, p. 231-455	833
1959, v. 126, no. 3, p. 575-578	772
1959, v. 126, no. 6, p. 1371-1374	762
Akademiya Nauk SSSR. Doklady.	
*Biological Science Papers	C-1
*Botanical Science Papers	C-1
*Otdel Biokhimii	C-1
*Otdel Fizicheskoy Khimii	C-1
*Otdel Geokhimii	C-1
*Otdel Geologii	C-1
*Otdel Khimicheskaya Tekhnologiya	C-1
*Otdel Khimii	C-1
*Otdel Prikladnoy Fiziki	C-1
*Physics Papers	C-1
Akademiya Nauk SSSR. Doklady. Fizicheskaya Khimiya	
1958, v. 121, nos. 1-6	774
Akademiya Nauk SSSR. Doklady. Khimiya	
1958, v. 122, nos. 1-6	766
Akademiya Nauk SSSR. Izvestiya. Seriya Biologicheskaya	
1958, v. 23, no. 5, p. 592-596	765
Akademiya Nauk SSSR. Izvestiya.	
*Seriya Fizicheskaya	C-1
1958, v. 22, no. 8, p. 895-997	826
1959, v. 23, no. 5, p. 538-668	826
Akademiya Nauk SSSR. Izvestiya.	
*Seriya Geofizicheskaya	C-1
1958, no. 3, p. 247-257	782
1958, no. 11, p. 1360-1373	782
1959, no. 3, p. 344-360	784
1959, no. 4, p. 505-515	783
Akademiya Nauk SSSR. Izvestiya.	
*Seriya Geologicheskaya	C-1
*Akademiya Nauk SSSR. Otdeleniye Khimicheskikh Nauk. Izvestiya	C-2
1954, no. 1, p. 142-148	773
1958, no. 5, p. 570-574	780
1958, no. 7, p. 801-908	766
1958, no. 8, p. 917-1017	766
1958, no. 9, p. 1025-1135	766
1958, no. 10, p. 1157-1281	766
1959, no. 2, p. 365-366	773
1959, no. 3, p. 417-424	771
1959, no. 3, p. 546-547	772
1959, no. 5, p. 763-951	766
Akademiya Nauk SSSR. Otdeleniye Tekhnicheskikh Nauk. Izvestiya	
1946, no. 1, p. 107-114	775
1950, no. 6, p. 888ff.	804
1954, no. 12, p. 86-91	817
1957, no. 8, p. 35-40	817

Journal	Page
1957, no. 10, p. 68-70	829
1958, no. 1, p. 83-86	815
1958, no. 6, p. 158-160	800
1958, no. 11, p. 70ff.	797
Akademiya Nauk SSSR. Otdeleniye Tekhnicheskikh Nauk. Izvestiya: Metallurgiya i Toplivo	
1959, no. 1, p. 3-124	819
Akademiya Nauk SSSR. Sektor Fiziko-Khimicheskogo Analiza. Izvestiya	
1955, v. 26, p. 270-274	778
Akademiya Nauk SSSR. Zoologicheskiy Institut. Trudy	
1948, v. 10, p. 5-18	765
Akademiya Nauk URSR, Kiev. Dopovidi	
1959, no. 5, p. 463-559	833
*Akusticheskiy Zhurnal (USSR)	C-2
Angewandte Chemie (West Germany)	
1938, v. 51, no. 32, p. 531-537	792
1955, v. 67, no. 7, p. 213-214	774
1958, v. 70, no. 24, p. 738-742	761
1959, v. 71, no. 3, p. 127	779
Annalen der Physik (East Germany)	
1930, 5 ser., v. 5, no. 6, p. 762-792	824
1939, 5 folge, v. 36, p. 284-294	775
1953, 6 folge, v. 11, no. 4-7, p. 362-367	828
1953, 6 folge, v. 11, no. 4-7, p. 368-376	828
1953, 6 folge, v. 11, no. 4-7, p. 377-382	818
Annales de Zootechnie (France)	
1955, v. 4, p. 153-163	759
Annener Gusstahlwerke A. G.,	
1938, 1 Dec. and 1940, 1 Jan.	787
*Antibiotiki (USSR)	C-2
Archiv fur das Eisenhüttenwesen (Germany)	
1930, v. 4, no. 3, p. 145-150	821
1932, v. 5, no. 8, p. 431-440	820
1937, v. 11, no. 4, p. 203-213	760
Archiv für Fischereiwissenschaft (West Germany)	
1955, v. 6, no. 3/4, p. 189-193	802
1957, v. 8, p. 94-103	801
Archiv für Technisches Messen und Industrielle Messtechnik (West Germany)	
1958, v. 267, p. 77-78	832
Archiv fur Kemi (Sweden)	
1921, v. 8, no. 14, p. 1-23	775
Articles from Literaturnaya Gazeta	
1959, 6 Jan. p. 1, and Znaniye-Sila	
1959, 4 Apr. p. 20-22	759
*Astronomicheskiy Zhurnal (USSR)	C-2
*Atomnaya Energiya (USSR)	C-2
1958, v. 5, no. 2, p. 105-212	825
1958, v. 5, no. 3, p. 217-387	825
1959, v. 6, no. 1, p. 42-48	B-3
1959, v. 6, no. 2, p. 140-144	B-2
1959, v. 6, no. 2, p. 204-205	B-1
1959, v. 6, no. 3, p. 338-340	B-1
1959, v. 6, no. 4, p. 369-503	825
1959, v. 6, no. 4, p. 391-402	B-2
1959, v. 6, no. 4, p. 403-425	B-3
1959, v. 6, no. 4, p. 426-430	B-2
1959, v. 6, no. 4, p. 472-474	B-3
1959, v. 6, no. 5, p. 509-608	825
1959, v. 6, no. 5, p. 528-532	B-2
1959, v. 6, no. 5, p. 533-539	B-1
1959, v. 6, no. 5, p. 565-567	B-1
1959, v. 6, no. 5, p. 568-569	B-1
1959, v. 6, no. 5, p. 582-584	B-1
*Avtomaticheskaya Svarka (USSR)	C-2
1959, v. 12, no. 4, p. 36-46	B-1
1959, v. 12, no. 4, p. 92-93	B-1
1959, v. 12, no. 5, p. 3-98	805
1959, v. 12, no. 6, p. 3-92	805
*Avtomatika i Telemekhanika (USSR)	C-2
Avtomatizatsiya Mashinostroitelnykh Protsessov	
1959, v. 1, p. 76-85	B-3
1959, v. 1, p. 115-125	B-2
1951, v. 1, p. 266-275	B-1
1959, v. 1, p. 280-289	B-2
1959, v. 1, p. 322-239	B-3
1959, v. 1, p. 344-347	B-2
Avtomobil'naya Promyshlennost' (USSR)	
1958, no. 2, p. 1-6	809
1959, no. 5, p. 1-47	808
1959, no. 6, p. 1-49	808
Berg- und Hüttenmännische Monatshefte (Austria)	
1959, v. 104, no. 2, p. 21-26	821
1959, v. 104, no. 2, p. 31-40	820
Beton i Zhelezobeton (USSR)	
1958, no. 10, p. 361-400	792
Bibliotheque Choisie de Medecine (France)	
1759, v. 5, p. 281-286 (Dissertation taken from Memoires de l'Academie Royal, 1736, p. 321)	761
*Biofizika (USSR)	C-2
*Biokhimiya (USSR)	C-2
1959, v. 24, no. 1, p. 3-171	761
Biologisches Zentralblatt (East Germany)	
1938, v. 58, no. 5/6, p. 273-301	765
1956, v. 75, p. 129-149	785
1956, v. 75, p. 476-499	785
Brennstoff-Chemie (West Germany)	
1954, v. 35, no. 23/24, p. 353-362	771
*Byulleten' Eksperimental'noy Biologii i Meditsiny (USSR)	C-2
*Byulleten' Izobreteniy (USSR)	C-2
1959, no. 1, p. 5-72	805
1959, no. 4, p. 5-71	805
Chaleur et Industrie (France)	
1937, v. 18, no. 201, p. 36-43	832
Chemia (Poland)	
1956, v. 4, no. 12, p. 41-65	773
Chemia Analityczna (Poland)	
1958, v. 3, p. 817-820	767
1958, v. 3, p. 893-895	768
Chemie-Ingenieur-Technik (West Germany)	
1954, v. 26, no. 6, p. 331-337	791
1956, v. 28, no. 2, p. 88-93	775
1959, v. 31, no. 3, p. 148-153	832
1959, v. 31, no. 4, p. 260-261	789
Chemische Berichte (Germany)	
1944, v. 77, p. 257-264	771
Chemisches Zentralblatt (Germany)	
1921, v. 92, no. 3, p. 1498	778

Journal	Page
Ch'i Hsiang Hsuch Pao (Chinese People's Republic)	
1955, v. 26, no. 1/2, p. 35-64	782
1957, Aug	781
Club International de Morphologie Faciale Acta (East Germany)	
1952, Sonderabdruck	761
Darstellung, Wahrung und Ubertragung der Einheit der Dosis für Röntgen-und Gamma-strahlen mit Quantenenergien Zwischen 3 keV und 500 keV, Braunscheig, 1955	B-2
Deutsche Medizinische Wochenschrift (West Germany)	
1958, v. 83, no. 19, p. 834-838	764
Dictionnaire Historique de la Medecine Ancienne et Moderne	
1836, v. 3, p. 1, p. 105-107	763
Digest of Soviet Technology	
Apr-Aug 59, 5 nos.	785
Eidgenoessische Technische Hoshschule, Zurich. Institut fur Aerodyn amik. Mitteilungen (Switzerland)	
1943, no. 8, p. 34-43	817
*Elektrichestvo (USSR)	C-2
1951, no. 6, p. 25-29	798
1954, no. 10, p. 55-62	800
1954, no. 10, p. 68-72	775
1955, no. 4, p. 62-68	794
1955, no. 5, p. 59-63	798
1955, no. 6, p. 25-32	794
1955, no. 9, p. 18-22	804
1955, no. 9, p. 54-59	795
1955, no. 10, p. 18-23	797
1955, no. 10, p. 24-28	796
1955, no. 10, p. 40-44	796
1955, no. 11, p. 15-26	798
1957, no. 8, p. 44-46	794
1957, no. 8, p. 47-48	798
1958, no. 1, p. 64-67	797
1959, no. 5, p. 1-96	793
*Elektrosvyaz (USSR)	C-2
1959, v. 13, no. 3, p. 3-96	793
Elektrosila (USSR)	
1956, no. 14, p. 5-11	796
1956, no. 14, p. 12-18	799
1956, no. 14, p. 19-24	799
1956, no. 14, p. 24-27	795
1956, no. 14, p. 27-32	796
1956, no. 14, p. 33-35	797
1956, no. 14, p. 35-40	795
1956, no. 14, p. 40-44	798
1956, no. 14, p. 44-51	803
1956, no. 14, p. 71-82	799
1956, no. 14, p. 98-102	798
1956, no. 14, p. 103-104	803
Energeticheskiy Byulleten' (USSR)	
1957, no. 7, p. 26-31	800
1958, no. 1, p. 1-32	793
Energetik (USSR)	
1959, no. 7, p. 1-38	799
Energia Nucleare (Italy)	
1955, v. 2, no. 16, p. 426-433	789
Enfance (France)	
1955, v. 8, no. 5, p. 509-514	834

Journal	Page
*Entomologicheskoye Obozreniye (USSR)	C-2
Erdöl und Kohle (West Germany)	
1955, v. 8, no. 10. p. 706-711	771
1956, v. 9, no. 7, p. 447-450	771
1959, v. 12, no. 2, p. 71-73	789
1959, v. 12, no. 3, p. 140-144	791
1959, v. 12, no. 4, p. 216-218	792
ETZ Elektrotechnische Zeitschrift Ausgabe A. Zentralblatt fur Elektrotechnik (Germany)	
1924, v. 45, no. 11, p. 210-213	803
Fan Hua-Hsueh Ping, Peking	
1957, p. 3-top of 34	763
Farbe und Lack (Germany)	
1940-v. 46, no. 38, p. 333-334	812
*Farmakologiya i Toksikologiya (USSR)	C-2
1956, v. 19, no. 4, p. 36-41	764
1958, v. 21, no. 6, p. 3-90	764
Faserforschung und Textiltechnik (Germany)	
1959, v. 10, no. 4, p. 155-158	812
1959, v. 10, no. 5, p. 214-224	812
Finska Kemistsamfundets Meddelanden	
1954, v. 63, p. 22-41	775
*Fizika Metallov i Metallovedeniye (USSR)	C-2
*Fizika Tverdogo Tela (USSR)	C-2
*Fiziologicheskiy Zhurnal SSSR im. I. M. Sechenova	C-2
*Fiziologiya Rastenii (USSR)	C-3
Forschung auf dem Gebiete des Ingenieurwesens (West Germany)	
1951, v. 17, no. 3, p. 65-76	832
Gann (Japan)	
1958, v. 49, suppl. p. 27-28	763
1958, v. 49, suppl. p. 28-30	763
Gazovaya Promshlennost' (USSR)	
1958, no. 8, p. 43-47	811
Gazzetta Chimica Italiana	
1959, v. 89, no. 11, p. 465-494	772
Geodeziye i Kartografiya (USSR)	
1959, no. 5, p. 3-80	783
*Geokhimiya (USSR)	C-3
1959, no. 3, p. 195-288	783
*Geologiya Nefti i Gaza (USSR)	C-3
1959, v. 3, no. 1, p. 52-55	783
1959, v. 3, no. 2, p. 49-52	783
1959, v. 3, no. 3, p. 22-29	783
Gidrotekhnika i Melioratsiya (USSR)	
1959, no. 6, p. 3-64	758
1959, no. 7, p. 3-64	758
Giesserei (Germany)	
1931, v. 18, Neue Folge, v. 4, no 7, p. 147-148	805
Glavnaya Geofizicheskaya Observatoriya, Leningrad. Trudy (USSR)	
1956, v. 59, no. 121, p. 37-39	832
Gummi und Asbest (West Germany)	
1959, v. 12, no. 3, p. 146-156	814
GWF; das Gas- und Wasserfach (West Germany)	
1958, v. 99, no. 41, p. 1045-1054	790
Haute Precision AOIP (France)	
1954, no. 3, p. 2-6	793
Helios (Germany)	
1915, v. 21, no. 11	794
Helvetica Physica Acta (Switzerland)	

Journal	Page
1952, v. 25, no. 4, p. 371-386	818
Hidrologiai Kozlony (Hungary)	
1957, v. 37, no. 3, p. 245-248	783
Holz als Roh- und Werkstoff (West Germany)	
1958, v. 16, no. 6, p. 215-220	814
1958, v. 16, no. 11, p. 221-226	814
Hutnické Listy (Czechoslovakia)	
1955, v. 10, no. 6, p. 322-329	805
1957, v. 12, no. 6, p. 517-520	822
Information on Soviet Bloc International Geophysical Cooperation:	
1959, 18 Sept 59	780
Issledovaniya v Oblasti Elektrich-eskogo Razryada v Gazakh (USSR)	
1958, p. 240	B-2
*Izmeritel'naya Tekhnika (USSR)	C-3
1958, no. 6, p. 39-41	B-2
1958, no. 6, p. 84-86	B-3
1959, no. 7, p. 1-64	834
Izvestiya (USSR)	
1958, no. 28, p. 4, col 1-5	760
1958, no. 185, col 1-7, p. 2	809
Izvestiya Vysshikh Uchebnykh Zavedeniy. Chernaya Metallurgiya (USSR)	
1958, no. 7, p. 37-43	822
1958, no. 8, p. 7-12	822
Izvestiya Vysshikh Uchebnykh Zavedeniy. Elektromekhanika (USSR)	
1958, no. 7, p. 3-130	793
1958, no. 8, p. 3-141	793
Izvestiya Vysshikh Uchebnykh Zavedeniy. Khimiya i Khimicheskaya Tekhnologiya (USSR)	
1959, v. 2, no. 1, p. 3-146	788
Izvestiya Vysshikh Uchebnykh Zavedeniy. Matematika (USSR)	
1958, no. 5, p. 166-174	834
Izvestiya Vysshykh Uchebnykh Zavedeniy. Neft' i Gaz (USSR)	
1959, no. 2, p. 47-52	784
1959, no. 2, p. 59-65	790
1959, no. 4, p. 41-48	803
Jaderna Energie (Czechoslavakia)	
1959, v. 3, p. 290-292	B-3
Jahrbuch der Deutschen Luftfahrtforschung (Germany)	
1938, sec. 1, p. 515-516	824
Journal of Colloid Science. Supplement (U. S.)	
1954, no. 1, p. 135-145	812
Journal of Physics (USSR)	
1941, v. 4, no. 5, p. 473-478	827
Justus Liebigs Annalen der Chemie (Germany)	
1899, v. 308, p. 333-343	773
*Kauchuk i Rezina (USSR)	C-3
*Kemisk Maanedsblad og Nordisk Handelsblad for Kemisk Industri (Scandinavia)	C-3
Khimicheskaya Nauka i Promy-shlennost' (USSR)	
1958, v. 3, no. 2, p. 146-158	772
1958, v. 3, no. 6, p. 690-841	788
1959, v. 4, no. 2, p. 230-234	768
1959, v. 4, no. 2, p. 235-241	768
Khimicheskaya Promyshlennost' (USSR)	
1958, no. 3, p. 58-59	814
1958, no. 6, p. 235-330	790
1959, no. 2, p. 93-185	788
Khimiya i Tekhnologiya Topliv i Masel (USSR)	
1958, v. 3, no. 8, p. 9-15	811
1958, v. 3, no. 12, p. 9-15	773
1958, v. 3, no. 12, p. 41-46	811
1958, v. 3, no. 12, p. 46-48	811
1959, v. 4, no. 1, p. 25-27	771
1959, v. 4, no. 1, p. 35-40	777
1959, v. 4, no. 1, p. 59-63	811
1959, v. 4, no. 1, p. 63-68	816
1959, v. 4, no. 2, p. 25-27	811
1959, v. 4, no. 3, p. 30-32	767
1959, v. 4, no. 3, p. 64-68	810
1959, v. 4, no. 4, p. 1-72	788
1959, v. 4, no. 4, p. 18-24	789
Kholodil'naya Tekhnika (USSR)	
1959, v. 36, no. 2, p. 1-79	785
1959, v. 36, no. 3, p. 1-79	785
Kislorod (USSR)	
1959, v. 12, no. 2, p. 1-55	788
1959, v. 12, no. 2, p. 37-38	789
Klinische Wochenschrift (Germany)	
1957, v. 35, no. 5, p. 225-236	763
K'o Hsueh T'ung Pao (Chinese People's Republic)	
1958, no. 23, p. 722-724	783
1959, no. 4, p. 108-109	785
1959, no. 4, p. 109-112	785
1959, no. 4, p. 112-115	784
1959, no. 4, p. 116-117	784
1959, no. 4, p. 118-120	784
1959, no. 4, p. 120-122	784
1959, no. 4, p. 122-123	784
1959, no. 4, p. 124-125	785
1959, no. 4, p. 126-128	792
Kobunshi Kagaku (Japan)	
1959, v. 16, p. 260-266	772
1959, v. 16, p. 266-270	772
Kogyo Kagaku Zasshi (Japan)	
1952, v. 55, p. 120-121	790
1952, v. 55, no. 9, p. 607-608	791
1952, v. 55, no. 11, p. 718-720	791
1957, v. 60, no. 4, p. 423-426	766
Koks i Khimiya (USSR)	
1957, no. 7, p. 6-8	789
Kolloid-Zeitschrift (West Germany)	
1953, v. 130, no. 1, p. 64-65	810
1956, v. 145, no. 2, p. 119-125	776
1959, v. 164, no. 1, p. 8-13	776
*Kolloidnyy Zhurnal (USSR)	C-3
1958, v. 20, no. 5, p. 515-697	774
Kompaundirovaniye Motornykh Topliv	
1958, p. 61-83	810
Komsomolskaya Pravda (USSR)	
1959, 22 Aug. no. 197, p. 4	B-2
*Kristallografiya (USSR)	C-3
Kristallografiya Moscow (USSR)	
1956, v. 1, p. 209-213	830
1958, v. 3, no. 6, p. 765-772	B-1
K'un Ch'ung Hsueh Pao (Chinese People's Republic)	

Journal	Page
1956, v. 5, no. 2, p. 166-180	765
Leningrad U. Vestnik (USSR)	
1958, no. 16	766
1958, no. 24, p. 118-119	782
1959, no. 1, p. 5-158	815
1959, no. 4	766
1959, no. 7, p. 5-160	815
Liteynoye Proizvodstvo (USSR)	
1957, no. 6, p. 1-4	807
1958, no. 7, p. 17-21	822
1959, no. 4, p. 1-48	805
1959, no. 6, p. 1-48	805
Luftfahrtforschung (Germany)	
1938, v. 15, no. 1/2, p. 41-47	817
1939, v. 16, no. 5, p. 251-275	787
Mashinostroitel' (USSR)	
1959, no. 5, p. 1-48	805
Masla i Konsistentnyye Smazki (Lubricating Oils and Greases) Moscow 1957	811
Masloboyno Zhirovaya Promyshlennost' (USSR)	
1958, v. 24, no. 1, p. 12-16 and no. 11, p. 17-19	802
Matematicheskiy Sbornik (USSR)	
1959, v. 47, no. 4, p. 397-430	815
Médecine et Hygiéne (Switzerland)	
1955, no. 13, p. 105-107	761
Mei-t'an Kung-yeh (Chinese People's Republic)	
1958, no. 22, p. 12-13, 18 and 28	810
Melliand Textilberichte (West Germany)	
1959, v. 40, no. 4, p. 403-408	812
1959, v. 40, p. 413-417	811
Memorial des Services Chimiques de l'Etat (France)	
1956/1957, v. 41, no. 7, p. 317-322	776
Metall (West Germany)	
1956, v. 10, no. 5/6, p. 205-211	805
*Metallovedeniye i Termicheskaya Obrabotka Metallov (USSR)	C-3
1959, no. 5, p. 2-64	819
*Metallurg (USSR)	C-3
1958, v. 3, no. 6, p. 27-29	804
1958, v. 3, no. 6, p. 29-30	804
la Metallurgia Italiana	
1953, v. 45, no. 8, p. 273-283	807
Meteorologiya i Gidrologiya (USSR)	
1957, no. 6, p. 46-47	782
1957, no. 6, p. 53-57	782
1959, no. 3, p. 3-65	781
1959, no. 4, p. 3-77	781
1959, no. 5, p. 3-63	781
1959, no. 6, p. 3-63	781
Mezhdunarodnyy Geofizicheskiy God-Informatsionnyy Byulleten (USSR)	
1958, no. 1, p. 3-111	781
*Mikrobiologiya (USSR)	C-3
1939, v. 8, no. 7, p. 828ff	763
Mineria y Metalurgia (Spain)	
1957, v. 2 21 Jan. and 24 Feb.	787
Mitteilungen aus den Forschungsanstalten (Germany)	
1931, v. 1, no. 8, p. 186-193	817
MPVO v Sel'skoy Mestnosti, Moscow	
1959, Chap. I-IV, p. 1-200	801
MTZ; Motortechnische Zeitschrift (Germany)	
1943, v. 5, no. 8/9, p. 242-248	818
die Naturwissenschaften (West Germany)	
1930, v. 18, no. 41, p. 867	828
1953, v. 40, no. 4, p. 137-138	779
Nauchnyye Doklady Vysshey Shkoly. Elektromekhanika Avtomatika (USSR)	
1958, no. 2, p. 3-241	793
Neftyanaya i Gazovaya Promyshlennost' SSSR v Poslevoyennyye Gody	
1958, p. 49-52 and 54-55	789
Neftyanik (USSR)	
1959, no. 2, p. 1-35	788
Neftyanoye Khozyaystvo (USSR)	
1958, v. 36, no. 11, p. 21-28	784
1959, v. 37, no. 1, p. 49-54	786
1959, v. 37, no. 1, p. 55-57	787
1959, v. 37, no. 4, p. 63-67	786
Nenryo Kyokai-Shi (Japan)	
1953, v. 32, p. 414-419	772
Nihon Kagaku Zasshi (Japan)	
1957, v. 78, no. 7, p. 981-982	777
Nihon Nogei-Kagakkai Shi (Japan)	
1958, v. 32, no. 10, p. 778-783	763
Nihon Ringaku Kaishi (Japan)	
v. 37, no. 4	814
Nihon Shashin Gakkai Kaishi (Japan)	
1958, v. 21, p. 115-120	813
Ogneupory (USSR)	
1959, v. 24, no. 4, p. 145-192	810
1959, v. 24, no. 5, p. 193-240	810
*Optika i Spektroskopiya (USSR)	C-3
1958, v. 5, no. 2, p. 219	827
1959, v. 6, no. 2, p. 129-272	827
Patent (Denmark)	
14 102	764
Patent (France)	
433 999	795
536 027 suppl. 1	801
558 063	793
590 562	758
656 582	796
750 154	813
812 183	786
833 633	785
871 031	770
917 287	806
993 520	805
998 481	769
1 010 818	803
1 022 419	807
1 106 527	813
Patent (Germany)	
307 153	797
372 925	795
423 826	813
542 640	803
554 906	787
685 941	809
804 620	808
873 937	809
900 201	786
950 836	803
1 019 805	810
Patent (Italy)	

Journal	Page
429 377	801
Patent (Japan)	
174 320	792
179 838	771
180 004	778
pub. 24-1314	778
pub. 28-4500	764
pub. 28-5368	812
pub. 28-6525	834
Patent (Netherlands)	
4270	799
68 392	824
Patent (Norway)	
72 162	793
Patent (Switzerland)	
273 309	758
Patent application (Germany)	
B 1 516	764
B 32 292	813
E 34 899	796
K 20 071, add.	790
M 20 249	788
*Pochvovedeniye (USSR)	C-3
Politekhnicheskiy Institut Novocherkassk. Trudy (USSR)	
1955, v. 26, p. 112-119	817
Pravda, Moscow (USSR)	
1958, 14 and 15 Nov.	786
1959, no. 157, p. 1	B-1
1959, no. 189, p. 6	B-1
1959, no. 200, p. 6	B-3
Pravda Vostoka (USSR)	
1957, no. 298, p. 4	781
1959, no. 2, p. 3, c. 1	800
*Priborostroyeniye (USSR)	C-3
*Pribory i Tekhnika Eksperimenta (USSR)	C-3
1958, no. 1, p. 41-46	825
1959, no. 3, p. 140-142	B-2
*Prikladnaya Matematika i Mekhanika (USSR)	C-3
1953, v. 17, p. 615-618	816
1959, v. 23, no. 1, p. 3-208	815
Primeneniye Vakuuma v Metallurgiy, Moscow	
1958, p. 54-61	819
*Problemy Gematologii i Perelivaniya Krovi (USSR)	C-3
1959, v. 4, no. 2, p. 3-46	761
Problemy Kibernetiki (USSR)	
1958, no. 1, p. 5-23	834
Proyektriovaniye Aviatsionnykh Elektricheskikh Mashin Postoyannogo Toka, (Designing of Aviation Electric Direct Current Machines) Moscow	
1958, p. 5-8, 10-12, 119-146, 399 and 407-409	787
Przeglad Gorniczy (Poland)	
1953, v. 9, p. 96-100	786
Psikhologiya, Moscow	
1958, p. 27-29, 227-252, 287-325 and 326-350	760
*Radiotekhnika (USSR)	C-3
1958, v. 13, no. 10, p. 3-80	793
*Radiotekhnika i Elektronika (USSR)	C-3
1957, v. 2, no. 1, p. 34-37	826
1958, v. 3, no. 4, p. 478-486	781
1958, v. 3, no. 9, p. 1107-1222	793
1958, v. 3, no. 9, p. 1107-1224	793
1959, v. 4, no. 5, p. 735-908	793
Razvedka i Okhrana Nedr (USSR)	
1959, v. 25, no. 5, p. 1-64	785
Recherches Morphologiques et Experimentales sur la Vascularisation Osseuse, Brussels	
1951, p. 65-74	761
Referativnyy Zhurnal. Biologiya (USSR)	
1958, no. 21	759
*Referativnyy Zhurnal. Geologiya (USSR)	C-4
Referativnyy Zhurnal Mekhanika (USSR)	
1957, no. 3, p. 1-165	816
1957, no. 4, p. 1-159	816
1957, no. 5, p. 4-142	816
*Referativnyy Zhurnal. Metallurgiya (USSR)	C-4
1957, no. 1	819
1959, no. 1, p. 1-289	819
1959, no. 3, p. 4-337	819
Revista Militar (Portugal)	
1957, v. 9, nos. 8-9, p. 469-502	834
1957, v. 9, no. 10, p. 565-595	834
Revue d'Economie Politique (France)	
1957, no. 67, p. 208-215	815
Revue de Metallurgie (France)	
1939, v. 36, Jan, p. 21-29	824
1958, v. 55, no. 2, p. 107-122	821
la Ricerca Scientifica ed il Progresso Technica nell'Economia Nazionale (Italy)	
1934, v. 1, no. 8, p. 452-453	826
Scientia Sinica (Chinese People's Republic)	
1958, v. 7, no. 2	782
Scientific Information Rept.	
17 July 59	834
31 July 59	834
4 Sept 59	834
Seikagaku (Japan)	
1958, v. 29, no. 12, p. 915-918	762
Selektsiya i Semenovodstvo (USSR)	
1958, v. 23, no. 5, p. 25-30	759
Semento Gijutsu Nenpo (Japan)	
1956, v. 10, p. 51-56	810
Société Francaise des Electriciens Bulletin	
1936, ser. 5, v. 6, no. 65, p. 547-554	807
Society for Cultural Relations with the U. S. S. R. Bulletin of the Architecture & Planning Group	
1952, no. 31, 10p.	792
Soobshcheniye o Nauchnykh Rabotakh po Meteorologii, Moscow.	
1957	781
Sovetskaya Aviatsiya (USSR)	
1958, no. 232, p. 2	788
1958, no. 271, p. 3	787
1958, no. 290, p. 2	788
1958, no. 291, p. 1	833
1959, no. 177, 1p.	B-2
*Sovetskaya Pedagogika (USSR)	C-4
Sovetskiy Flot (USSR)	
1958, no. 277, p. 2	788
Soviet Metal Technology	
1959, v. 2, no. 2	819

Journal	Page
1959, v. 2, no. 3	819
Spravochnik po Teploperedache 1958, 414 p.	B-2
Stahl und Eisen (West Germany) 1958, v. 78, no. 24, p. 1745-1748	807
1959, v. 79, 6 Aug, p. 1120-1129	823
*Stal' (USSR)	C-4
1957, v. 17, no. 3, p. 243-253	806
1957, v. 17, no. 11, p. 968-976	808
1958, v. 18, no. 4, p. 311-316	821
1958, v. 18, no. 7, p. 642	824
*Stanki i Instrument (USSR)	C-4
*Steklo i Keramika (USSR)	C-4
1959, v. 16, no. 5, p. 1-44	810
Stroitel'naya Promyshlennost' (USSR) 1956, no. 3, p. 29-31	812
*Svarochnoye Proizvodstvo (USSR)	C-4
1958, no. 1, p. 30-31	808
1959, no. 5, p. 1-48	806
1959, no. 5, p. 22-27	B-1
1959, no. 7, p. 1-48	806
Tekhnika Molodezhi (USSR) 1957, v. 25, no. 8, p. 26	786
1959, v. 27, no. 2, p. 5-6	834
*Teoriya Veroyatnostey i Yeye Primeneniye (USSR)	C-4
Teploenergetika (USSR) 1958, v. 5, no. 10, p. 61-65	B-1
1959, v. 6, no. 3, p. 45-49	804
1959, v. 6, no. 6, p. 3-96	799
Textil-Rundschau (Switzerland) 1958, v. 13, no. 12, p. 694-704	814
Ti li yu ch'an yeh (China) 1956, v. 1, no. 1, p. 48-49	758
*Tsement (USSR)	C-4
1959, v. 25, no. 3, p. 1-32	792
Tsitologiya (USSR) 1959, v. 1, no. 1, p. 3-140	762
Tsvetnyye Metally (USSR) 1957, v. 30, no. 5, p. 85-90	808
1959, v. 32, no. 4, p. 1-95	823
Ugol' (USSR) 1958, v. 33, no. 7, p. 28-30	784
Ukazatel' Sokrashchennykh i Polnykh Nazvaniy Nauchnoy i Teknicheskoy Literatury, Moscow 1957	757
Ukrainskiy Khimicheskiy Zhurnal (USSR) 1954, v. 20, p. 620-625	778
Ukrayins'kyy Biokhimichnyy Zhurnal (USSR) 1958, v. 30, no. 2, p. 212-218	764
Ukrayins'kyy Fizychnyy Zhurnal (USSR) 1956, v. 1, no. 3, p. 308-311	799
*Uspekhi Fizicheskikh Nauk (USSR)	C-4
1951, v. 43, no. 4, p. 587-599	833
1957, v. 61, no. 4, p. 561-612	833
1959, v. 67, no. 4, p. 549-750	831
1959, v. 68, no. 1, p. 3-198	831
Uspekhi Khimii (USSR) 1955, v. 24, p. 14-31	776
1958, v. 27, no. 12, p. 1361-1436	771
1959, v. 28, no. 4, p. 369-518	766
1959, v. 28, no. 5, p. 521-646	766
Vakuum-Technik (Germany) 1959, v. 8, no. 2, p. 39-43	790
1959, v. 8, no. 2, p. 44-47	810
VDI-Forschungsheft (West Germany) 1958, no. 469	B-2
Verein Deutscher Ingenieure. Zeitschrift (West Germany) 1952, v. 94, no. 3, p. 79-84	804
1952, v. 94, no. 19, p. 595-598	803
1952, v. 94, no. 25, p. 829-832	809
1957, v. 99, no. 15, p. 667-671	803
1959, v. 101, p. 747-752	B-3
Verpackungsrundschau (West Germany) 1951, no. 1	801
Vestnik Elektropromyshlennosti (USSR) 1959, v. 30, no. 4, p. 1-80	794
1959, v. 30, no. 6, p. 1-80	794
*Vestnik Mashinostroyeniya (USSR)	C-4
Vestnik Rentgenologii i Radiologii (USSR) 1959, v. 34, no. 3, p. 47-52	765
Vestnik Svyazi (USSR) 1958, no. 1, p. 7-9	794
Veterinariya (USSR) 1959, v. 36, no. 5, p. 41-45	759
Vlaamse Chemische Vereniging Mededelinger (Belgium) 1958, v. 20, p. 102-113	770
Vliyaniye Oblucheniya na Struktury i Svoystva Konstruktsionnykh Metallov, Moscow 1958, 39p.	B-2
*Voprosy Ekonomiki (USSR)	C-4
Voprosy Filosofii (USSR) 1958, no. 6, p. 127-138	763
1958, no. 7, p. 102-112	762
*Voprosy Onkologii (USSR)	C-4
Voprosy Pitaniya (USSR) 1958, v. 17, July/Aug	802
1958, v. 17, no. 4, p. 24-28	761
Voprosy Psikhologii (USSR) 1958, v. 4, no. 1, p. 24-36	760
1958, v. 4, no. 1, p. 184-190	760
1958, v. 4, no. 3, p. 161-167	760
*Voprosy Virusologii (USSR)	C-4
Vsesoyuznyy Nauchno-Issledovatel'skiy Institut po Pererabotke Slantsev. Trudy (USSR) 1958, v. 7, no. 6, p. 120-130	767
Vvedenie v Kristallokhimiyu, Moscow 1954, 490p.	B-1
Werkstattstechnik und Werksleiter (Germany) 1930, v. 24, no. 24, p. 668-670	807
Wissenschaftliche Veröffentlichungen aus den Siemens-Werken (Germany) 1940, v. 19, no. 1, p. 280-290	776
Wochenblatt für Papierfabrikation (West Germany) 1958, v. 86, no. 8, p. 298-308	815
Wu-Hsien-tien (Chinese people's Republic) 1958, no. 12, p. 4-6, 18-19	795
Yakugaku Zasshi (Japan) 1956, v. 76, no. 6, p. 629-631	762
1956, v. 76, no. 6, p. 747-748	762
Za Ekonomiyu Topliva (USSR) 1951, v. 1, p. 8-14	789
Zashchita Rastenii ot Vrediteley	

Page	Journal	Page
B-2	i Bolezney (USSR)	
	1959, v. 4, no. 2, p. 4-6	759
	*Zavodskaya Laboratoriya (USSR)	C-4
	1957, v. 23B, p. 925-927	822
804	1957, v. 23, no. 12, p. 1462-1466	825
803	1958, v. 24, no. 8, p. 922-925	768
809	1959, v. 24, no. 8, p. 941-947	767
803	1958, v. 24, no. 10, p. 1290-1291	B-3
B-3	1958, v. 24, no. 11, p. 1356-1358	767
	1958, v. 24, no. 11, p. 1373-1374	767
	1958, v. 24, no. 12, p. 1449-1457	B-1
801	1959, v. 25, no. 5, p. 515-640	819
	Zeitschrift für Angewandte Physik	
794	(West Germany)	
794	1958, v. 10, no. 3, p. 150-155	827
C-4	Zeitschrift für Anorganische Chemie	
	(East Germany)	
765	1920, v. 113, p. 306-316	769
	1952, v. 267, no. 4/5, p. 189-197	769
794	1952, v. 268, no. 3, p. 191-200	769
	1952, v. 269, no. 1/2, p. 1-12	769
759	1952, v. 269, p. 67-75	776
	1952, v. 271, no. 1/2, p. 6-16	768
	Zeitschrift für Elektrochemie	
770	(West Germany)	
	1958, v. 62, no. 6/7, p. 660-663	777
	1958, v. 62, no. 6/7, p. 739-745	779
	1958, v. 62, no. 6/7, p. 745-750	777
B-2	1958, v. 62, no. 6/7, p. 751-759	779
C-4	1959, v. 63, no. 3, p. 360-373	776
	Zeitschrift für Lebensmittel-	
763	Untersuchung und Forschung (West	
762	Germany)	
C-4	1955, v. 102, no. 4, p. 236-245	802
	1956, v. 104, no. 1, p. 26-28	768
802	1957, v. 105, no. 3, p. 207-210	761
761	1957, v. 106, no. 3, p. 178-196	802
	Zeitschrift für Metallkunde	
760	(West Germany)	
760	1930, v. 22, no. 8, p. 269-272	821
760	1930, v. 22, no. 8, p. 277-279	823
C-4	1930, v. 22, no. 8, p. 280-283	825
	1930, v. 22, no. 12, p. 397-401	823
	1931, v. 23, no. 1, p. 18	823
	1936, v. 28, no. 9, p. 248-253	820
767	1936, v. 28, no. 12, p. 391-393	819
	1937, v. 29, no. 10, p. 353-354	825
B-1	1937, v. 29, no. 12, p. 418-420	816
	1938, v. 30, no. 9, p. 350-352	819
	1953, v. 44, no. 2, p. 43-50	816
807	Zeitschrift für Naturforschung	
	(West Germany)	
	1952, v. 7a, no. 11, p. 744-749	831
776	1958, v. 13a, p. 794-796	825
	Zeitschrift für Physik (West Germany)	
	1936, v. 101, no. 9/10, p. 541-577	774
815	1952, v. 131, no. 4, p. 456-469	818
	1953, v. 134, no. 4, p. 435-450	796
	1953, v. 134, no. 4, p. 469-482	797
795	Zeitschrift für Physikalische Chemie	
	Frankfurt (West Germany)	
762	1957, Neue Folge, v. 12, p. 132-138	830
762	*Zhurnal Analiticheskoy Khimii (USSR)	C-4
	1959, v. 14, no. 2, p. 147-256	766
789		

Journal	Page
*Zhurnal Eksperimental'noy i	
Teoreticheskoy Fiziki (USSR)	C-4
1954, v. 26, no. 5, p. 562-575	828
1954, v. 26, no. 6, p. 668-679	828
1954, v. 27, no. 2(8), p. 142-146	831
1954, v. 27, no. 4(10), p. 487-500	797
1956, v. 30, no. 4, p. 806	828
1957, v. 33, no. 6(12), p. 1509-1511	832
1959, v. 36, no. 4, p. 969-1336	826
1959, v. 36, no. 5, p. 1337-1616	826
Zhurnal Fizicheskoy Khimii (USSR)	
1949, v. 23, no. 5, p. 616-624	829
1957, v. 31, no. 9, p. 2138-2139	777
1958, v. 32, no. 2, p. 291-297	777
1958, v. 32, no. 4, p. 785-790	776
1958, v. 32, no. 4, p. 831-833	780
1958, v. 32, no. 4, p. 882-893	770
1958, v. 32, no. 5, p. 1049-1054	774
1958, v. 32, no. 8, p. 1831-1841	773
1958, v. 32, no. 10, p. 2383-2391	831
1958, v. 32, no. 12, p. 2792-2796	775
1959, v. 33, no. 1, p. 197-203	777
1959, v. 33, no. 2, p. 326-327	780
1959, v. 33, no. 4, p. 745-957	774
1959, v. 33, no. 4, p. 922-929	777
*Zhurnal Mikrobiologii, Epidemiologii	
i Immunobiologii (USSR)	C-4
1958, v. 29, no. 12, p. 3-144	762
Zhurnal Nauchnoy i Prikladnoy Fotograf	
II i Kinematograf II (USSR)	
1959, v. 4, no. 4, p. 241-320	812
*Zhurnal Neorganicheskoy Khimii (USSR)	C-4
1956, v. 1, p. 1850-1856	780
1957, v. 2, no. 5, p. 1015-1024	767
1957, v. 2, no. 9, p. 2129-2135	770
1958, v. 3, no. 8, p. 1727-1730	769
1958, v. 3, no. 10, p. 2366-2374	770
1958, v. 3, no. 11, p. 2445-2449	B-3
1959, v. 4, no. 6, p. 1225-1463	770
*Zhurnal Obshchey Khimii (USSR)	C-5
1935, v. 5, no. 10, p. 1460-1467	771
1936, v. 6, no. 11, p. 1694-1697	768
1951, v. 21, no. 10, p. 1897-1902	770
1956, v. 26, no. 3, p. 739-745	773
1958, v. 28, no. 8, p. 2005-2307	766
1958, v. 28, no. 11, p. 2909-2915	779
1959, v. 29, no. 4, p. 1049-1401	766
1959, v. 29, no. 6, p. 1998-2006	773
1959, v. 29, no. 6, p. 2042-2045	771
*Zhurnal Prikladnoy Khimii (USSR)	C-5
1937, v. 10, no. 9, p. 1696-1699	768
1949, v. 22, no. 10, p. 1124-1132	784
1957, v. 30, no. 4, p. 643-645	766
1958, v. 31, no. 6, p. 946-948	776
1958, v. 31, no. 9, p. 1281-1444	766
1959, v. 32, no. 1, p. 128-132	807
1959, v. 32, no. 3, p. 473-704	789
1959, v. 32, no. 6, p. 1354-1359	771
*Zhurnal Tekhnicheskoy Fiziki (USSR)	C-5
1950, v. 20, no. 3, p. 258-281	799
1954, v. 24, no. 2, p. 308-319	829
1955, v. 25, no. 12, p. 2050-2060	830
1957, v. 27, no. 9, p. 2109-2128	832
*Zhurnal Vysshey Nervnoy Deyatel'-	
nosti im. Pavlova (USSR)	C-5

Journal	Page
der Zuchter (Germany) 1957, v. 27, no. 2, p. 85-89	762

Journal	Page
Zoologicheskiy Zhurnal (USSR) 1958, v. 37, no. 10, p. 1521-1530	765

TRANSLATION NUMBER INDEX

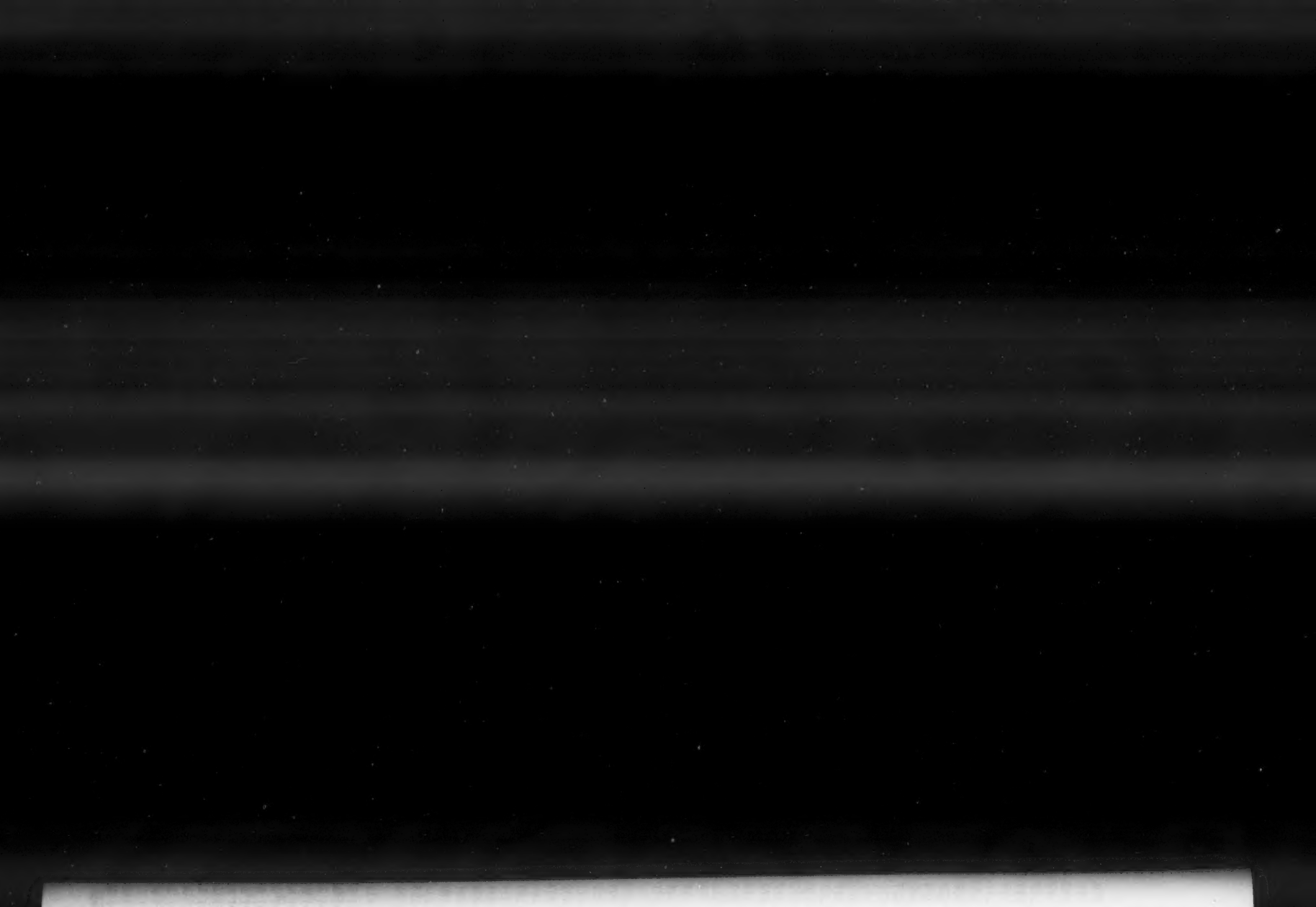
Number	Page
59-11275	763
59-11462	810
59-11510	800
59-11596	782
59-11598	782
59-11602	808
59-11609	794
59-11616	781
59-11745	758
59-11749	758
59-11765	781
59-11770	834
59-11771	765
59-11778	760
59-11779	801
59-11782	757
59-11783	785
59-11784	785
59-11785	784
59-11786	784
59-11787	784
59-11788	784
59-11789	784
59-11790	785
59-11791	792
59-12010	834
59-12011	834
59-12933	826
59-12935	771
59-12937	792
59-12950	787
59-13227	764
59-13491	795
59-13528	783
59-13739	762
59-13781	806
59-13832	767
59-13833	763
59-13840	760
59-13841	760
59-13843	760
59-13847	759
59-13848	762
59-13852	792
59-14277	762
59-14544 (MDF K-191)	831
59-14565 (AEC-tr-3527)	832
59-13624	764
59-14642 (RIS TB-180, sec. 1-4)	813
59-14948 (SCL-T-232)	782
59-15107	824
59-15210	827
59-15351	814
59-15410	762
59-15465	773
59-15473	761
59-15547	763
59-15586	793
59-15606	761
59-15612	761
59-15679	761
59-15696	807
59-15726	765
59-15757	791
59-15777	812
59-15883	794
59-15885	764
59-15898	765
59-16007	782
59-16022	782
59-16316	781
59-16318	800
59-16321	782
59-16445	826
59-16450	757
59-16639	826
59-16733	815
59-16786	817
59-16965	759
59-16989	812
59-17091	810
59-17094	801
59-17107	793
59-17268	777
59-17298	820
59-17306	769
59-17317	775
59-17364	792
59-17479	789
59-17507	776
59-17523	789
59-17526	768
59-17539	826
59-17553	827
59-17672	787
59-17684	826
59-17689	817
59-17690	787
59-17694	765
59-17711	817
59-17724	818
59-17727	817
59-17823	801
59-17833	805
59-17840	764
59-17841	813
59-17843	812
59-17846	764
59-17850	758
59-17855	796
59-17856	795
59-17857	796
59-17858	795
59-17861	764
59-17867	834
59-17870	818
59-17876	778
59-17878	771
59-17891	770
59-17894 (CEA-tr-X57)	786
59-17896	810
59-17897 (CEA-tr-X119)	787
59-17909	829
59-17926	763
59-17927	763
59-17929	803
59-17930	828
59-17931	828
59-17933	804
59-17936	779
59-17940	818
59-17941	796
59-17942	797
59-17943	823
59-17946	778
59-17947	793
59-17954	803
59-17956	769
59-17957	769
59-17958	769
59-17959	768
59-17960	831
59-17961	774
59-17962	779
59-17963	810
59-17964	818
59-17965	816
59-17986	770
59-17990	778
59-18186 (AEC-tr-3613)	822
59-18249 (CCT-228TT)	817
59-18250 (CCT-234TT)	829
59-18255 (CCT-518TT)	775
59-18275	759
59-18284	813
59-18286	806
59-18287	807
59-18288	813
59-18289	797
59-18290	803
59-18292	808
59-18293	809
59-18294	786
59-18296	758
59-18307	765

Number	Page
59-18311	759
59-18329	821
59-18382	789
59-18425	757
59-18454	811
59-18455	792
59-18509	799
59-18594 (NRCC TT-785)	775
59-18609 (NRCC TT-800)	765
59-18610 (NRCC TT-801)	832
59-18611 (NRCC TT-802)	785
59-18612 (NRCC TT-803)	785
59-18613 (NRCC TT-804)	785
59-18626	830
59-18627	804
59-18628	790
59-18631	798
59-18632	798
59-18633	797
59-18634	795
59-18636	799
59-18638	803
59-18639	796
59-18640	799
59-18641	799
59-18643	798
59-18644	829
59-18645	830
59-18647	798
59-18648	798
59-18650	796
59-18651	797
59-18652	795
59-18653	796
59-18654	794
59-18655	794
59-18657	775
59-18658	798
59-18659	794
59-18661	800
59-18663	816
59-18670	796
59-18672	803
59-18674	795
59-18679	828
59-18680	828
59-18681	828
59-18682	800
59-18683	831
59-18703 (NRCC C-3099)	814
59-18704 (NRCC C-3108)	814
59-18733	770
59-18737	817
59-18739	781
59-18750	776
59-18751	780
59-18753	768
59-18754	829
59-18755	818
59-18756	797
59-18757	802
59-18764	816
59-18766	794
59-18768	827
59-18769	808
59-18770	798
59-18772	800
59-18773	826
59-18778	786
59-18779	785
59-18780	805
59-18784	813
59-18787	787
59-18788	809
59-18792	799
59-18796	786
59-18802 (AEC-tr-3651)	825
59-18825 (AEC-tr-3734)	772
59-18826 (AEC-tr-3733)	778
59-18831	765
59-18833 (SCL-T-257)	797
59-18837	764
59-18857	809
59-18862 (Bogolyubov)	831
59-18948	814
59-18950	777
59-19084	763
59-19096	792
59-19158	802
59-19218	803
59-19226	803
59-19243	780
59-19245 (BULLETIN)	766
59-19246	761
59-19248	784
59-19249	804
59-19254	759
59-19425 (BISITS-1431)	823
59-19449 (SOVIET)	825
59-19450 (SOVIET)	825
59-19451 (JOURNAL)	766
59-19452 (PROCEEDINGS)	774
59-19453 (PHARMACOLOGY)	764
59-19454 (BULLETIN)	766
59-19455 (Gantmacher)	815
59-19558 (HB-4668)	808
59-19567 (RADIO)	793
59-19571 (HB-4640)	822
59-19577 (HB-4365)	819
59-19580 (HB-4644)	821
59-19581 (HB-4645)	820
59-19583 (HB-4610)	822
59-19584 (HB-4596)	805
59-19587 (HB-4633)	822
59-19592 (HB-4642)	806
59-19595 (HB-4272)	807
59-19596 (HB-4560)	822
59-19648 (ATS-88L34R)	771
59-19651 (ATS-09L34P)	768
59-19653 (ATS-93L33J)	772
59-19655 (ATS-57L33R)	772
59-19656 (ATS-55L34R)	772
59-19657 (ATS-21L33R)	825
59-19659 (ATS-09L33J)	772
59-19666 (BULLETIN)	826
59-19667 (JOURNAL)	762
59-19685	806
59-19686 (BIOCHEMISTRY)	761
59-19687-(1-5) (DIGEST)	785
59-19712	811
59-19715	825
59-19718	825
59-19719	757
59-19723	787
59-19725	800
59-19730 (MDF V-135)	831
59-19731 (MDF V-134)	768
59-19732 (MDF N-106)	768
59-19734 (MDF K-168)	777
59-19737 (JOURNAL)	815
59-19738 (PROBLEMS)	761
59-19739 (RADIO)	793
59-19760	809
59-19783 (JOURNAL)	766

Number	Page
59-19784 (BULLETIN)	766
59-19785 (BULLETIN)	766
59-19786 (PROCEEDINGS)	766
59-19795 (RIS R-762)	770
59-19796 (RIS R-765)	769
59-19804 (RIS 61053)	813
59-19806	802
59-19807 (OPTICS)	827
59-19808 (COLLOID)	774
59-19809 (SOVIET)	819
59-19810 (SOVIET)	819
59-19820	780
59-19821	806
59-19822 (ATS-14L34J)	772
59-19823 (ATS-89L33J)	790
59-19824 (ATS-21L34J)	813
59-19825 (ATS-30L34R)	786
59-19827 (ATS-26L34R)	773
59-19828 (ATS-68L34R)	762
59-19830 (ATS-98L33R)	762
59-19832 (ATS-33L33R)	779
59-19833 (ATS-91L33J)	791
59-19834 (ATS-90L33J)	791
59-19835 (ATS-45L33R)	773
59-19839 (ATS-99L33R)	811
59-19841 (ATS-95L33R)	789
59-19842 (ATS-29L33R)	780
59-19843 (ATS-15L33J)	766
59-19844 (ATS-45L34R)	803
59-19846 (ATS-81L33R)	799
59-19850 (ATS-19L34R)	784
59-19851 (ATS-36L34R)	790
59-19852 (ATS-20L34R)	783
59-19854 (ATS-28L34R)	790
59-19856 (ATS-87L33R)	770
59-19857 (ATS-96L33R)	767
59-19858 (ATS-13L34H)	783
59-19860 (ATS-25L34R)	784
59-19865 (ATS-28L33R)	766
59-19867 (ATS-47L33R)	810
59-19868 (ATS-31L34R)	776
59-19870 (ATS-34L33R)	776
59-19873 (ATS-22L34J)	762
59-19874 (ATS-16L34R)	789
59-19877 (ATS-51L33R)	777
59-19878 (ATS-23L34J)	762
59-19879 (ATS-84L33R)	771
59-19880 (ATS-37L34R)	790
59-19881 (ATS-10L34P)	767
59-19882 (ATS-40L32R)	771
59-19883 (ATS-47L34R)	771
59-19884 (ATS-88L33R)	777
59-19885 (ATS-30L33R)	777
59-19907 (ATS-67L29R)	784
59-19908 (ATS-14L30R)	767
59-19909 (ATS-44L30R)	773
59-19910 (ATS-54L30R)	767
59-19911 (ATS-11L31R)	775
59-19912 (ATS-20L31R)	786
59-19913 (ATS-12L31R)	811
59-19914 (ATS-21L31R)	787
59-19915 (ATS-28L31R)	783
59-19919 (ATS-62L31R)	772
59-19920 (ATS-64L31R)	774
59-19922 (ATS-70L31R)	779
59-19923 (ATS-71L31R)	783
59-19924 (ATS-76L31R)	811
59-19926 (ATS-09L32R)	816
59-19931 (ATS-24L32R)	784
59-19932 (ATS-33L32R)	773
59-19939 (ATS-73L32R)	783
59-19941 (ATS-83L32R)	779
59-19944 (ATS-96L32R)	773
59-19946 (ATS-16L33R)	771
59-19951 (ATS-76L33R)	780
59-19952 (ATS-77L33R)	827
59-19958 (BISITS-1451)	821
59-19972 (ATS-79L33G)	774
59-19974 (ATS-38L33G)	789
59-19975 (ATS-98L32G)	819
59-19980 (ATS-15L34G)	789
59-19981 (ATS-07L34G)	810
59-19989 (ATS-32L33G)	776
59-19990 (ATS-34L34G)	811
59-19991 (ATS-68L33G)	832
59-19992 (ATS-69L33G)	812
59-19993 (ATS-00L34F)	776
59-19995 (ATS-22L32G)	776
59-19996 (ATS-01L34G)	807
59-19997 (ATS-42L33G)	776
59-19998 (ATS-25L33G)	777
59-20001	801
59-20008	767
59-20009	768
59-20010	767
59-20035	829
59-20036	828
59-20039	829
59-20043	790
59-20047	791
59-20050	807
59-20056	771
59-20057	771
59-20058	771
59-20059	809
59-20075	832
59-20077	824
59-20079	821
59-20080	824

Number	Page
59-20084	804
59-20085	804
59-20087	814
59-20090 (CEA-tr-A572)	832
59-20100	815
59-20129	770
59-20131	769
59-20132	791
59-20134	761
59-20135	778
59-20136	830
59-20140	830
59-20141	820
59-20144	790
59-20147	761
59-20148	768
59-20149	803
59-20152	762
59-20154	834
59-20157	802
59-20158	815
59-20164	775
59-20165	763
59-20171	759
59-20179	802
59-20180	778
59-20183	790
59-20184	788
59-20220	814
59-20223	805
59-20227	773
59-20228	821
59-20229	820
59-20230	824
59-20231	812
59-20232	819
59-20233	816
59-20234	820
59-20249	828
59-20251	807
59-20252	824
59-20257	774
59-20275	773
59-20281	775
59-20283	832
59-20285	833
59-20286	833
59-20288	760
59-20290	774
59-20291	832
59-20292	773
59-20293	780
59-20294	777
59-20295	771
59-20296	763
59-20297	802
59-20312	759
59-20314	805
59-20315	776
59-20317	807
59-20332	823
59-20333	823
59-20334	825
59-20335	823
59-20336	821
59-20344	825
59-20348	819
59-20424	760
59-21129	797
59-21130	804
59-21176	757
59-21177	772
59-22002 (ATS-22L33G)	777
59-22003 (ATS-35L34G)	812
59-22004 (ATS-27L33G)	777
59-22005 (ATS-97L32G)	827
59-22007 (ATS-06L34G)	790
59-22008 (ATS-08L33G)	825
59-22009 (ATS-02L34I)	807
59-22011 (ATS-11L33I)	772
59-22015 (ATS-26L33G)	779
59-22018 (ATS-44L33G)	830
59-22019 (ATS-23L33G)	779
59-22020 (ATS-49L33G)	812
59-22022 (ATS-97L33G)	791
59-22023 (ATS-44L34G)	792
59-22024 (ATS-24L34G)	774
59-22187	801
59-22189	786
59-22190	833
59-22191	810
59-22192	787
59-22193	811
59-22195	789
59-22197	781
59-22198	782
59-22199	760
59-22201	788
59-22202	811
59-22203	833
59-22204	787
59-22205	788
59-22207	788
59-22208	809
ACSI H-0927 A	834
ACSI H-0927 B	834
ACSI H-1613	763
AD-135 482	796
AEC-tr-3527	832
AEC-tr-3613	822
AEC-tr-3651	825
AEC-tr-3733	778
AEC-tr-3734	772
AERE Lib/Trans. 456	775
AERE Lib/Trans-560	789
AERE Lib/Trans-573	776
AERE Lib/Trans-606	789
AERE Lib/Trans-609	768
AERE Lib/Trans-623	826
AERE Lib/Trans-643	827
AF-1 165 884	760
AF-1 173 655, Suppl.	781
AF-1 183 896	782
AF-1 185 157	781
AF-1 187 420	786
AF-1 187 430	789
AF-1 187 449	811
AF-1 255 404	809
AF-1 255 405	788
AF-1 255 424	788
AF-1 255 435	787
AF-1 255 326	833
AF-1 255 440	811
AF-1 255 459	787
AF-1 255 475	788
AF-1 255 524	782
AF-1 255 526	800
AF-1 255 659	781
AF-1 255 706	826
AF-1 255 713	757
AF-1 255 759	810
AF-1 255 814	833
AF-1 255 825	787
AF-1 255 828	826
AF-1 255 844	759
AF-1 255 854	757
AF-1 255 909	792
AF-1 255 913	811
AF-1 255 952	787
AF-1 255 956	800
AF-1 255 969	757
AF-1 255 975	825
AF-1 255 996	825
AF-1 256 018	811
APL/JHU TG-230-T78	804
APL/JHU TG 230-T86	797
ATS-00L34F	776
ATS-01L34G	807
ATS-02L34I	807
ATS-06L34G	790
ATS-07L34G	810
ATS-08L33G	825
ATS-09L32R	816
ATS-09L33J	772
ATS-09L34P	768
ATS-10L34P	767
ATS-11L31R	775
ATS-11L33I	772
ATS-12L31R	811
ATS-13L34H	783
ATS-14L30R	767
ATS-14L34J	772
ATS-15L33J	766
ATS-15L34G	789
ATS-16L33R	771
ATS-16L34R	789
ATS-19L34R	784
ATS-20L31R	786
ATS-20L34R	783
ATS-21L31R	787
ATS-21L33R	825
ATS-21L34J	813

Number	Page
ATS-22L32G	776
ATS-22L33G	777
ATS-22L34J	762
ATS-23L33G	779
ATS-23L34J	762
ATS-24L32R	784
ATS-24L34G	774
ATS-25L33G	777
ATS-25L34R	784
ATS-26L33G	779
ATS-26L34R	773
ATS-27L33G	777
ATS-28L31R	783
ATS-28L33R	766
ATS-28L34R	790
ATS-29L33R	780
ATS-30L33R	777
ATS-30L34R	786
ATS-31L34R	776
ATS-32L33G	776
ATS-33L32R	773
ATS-33L33R	779
ATS-34L33R	776
ATS-34L34G	811
ATS-35L34G	812
ATS-36L34R	790
ATS-37L34R	790
ATS-38L33G	789
ATS-40L32R	771
ATS-42L33G	776
ATS-44L30R	773
ATS-44L33G	830
ATS-44L34G	792
ATS-45L33R	773
ATS-45L34R	803
ATS-47L33R	810
ATS-47L34R	771
ATS-49L33G	812
ATS-51L33R	777
ATS-54L30R	767
ATS-55L34R	772
ATS-57L33R	772
ATS-62L31R	772
ATS-64L31R	774
ATS-67L29R	784
ATS-68L33G	832
ATS-68L34R	762
ATS-69L33G	812
ATS-70L31R	779
ATS-71L31R	783
ATS-73L32R	783
ATS-76L31R	811
ATS-76L33R	780
ATS-77L33R	827
ATS-79L33G	774
ATS-81L33R	799
ATS-83L32R	779
ATS-84L33R	771
ATS-87L33R	770
ATS-88L33R	777
ATS-88L34R	771
ATS-89L33J	790
ATS-90L33J	791
ATS-91L33J	791
ATS-93L33J	772
ATS-95L33R	789
ATS-96L32R	773
ATS-96L33R	767
ATS-97L32G	827
ATS-97L33G	791
ATS-98L32G	819
ATS-98L33R	762
ATS-99L33R	811
BISITS-1431	823
BISITS-1451	821
CCT-228TT	817
CCT-234TT	829
CCT-518TT775	775
CEA-tr-A572	832
CEA-tr-X57	786
CEA-tr-X119	787
CPSU Congress (no. 21)	786
CTS-398	812
DSIR LLU M. 3	830
DSIR LLU M. 4	830
DSIR LLU M. 5	790
DSIR LLU M. 8	798
DSIR LLU M. 9	798
DSIR LLU M. 10	797
DSIR LLU M. 11	795
DSIR LLU M. 13	799
DSIR LLU M. 15	803
DSIR LLU M. 16	796
DSIR LLU M. 20	798
DSIR LLU M. 21	829
DSIR LLU M. 22	830
DSIR LLU M. 24	798
DSIR LLU M. 25	798
DSIR LLU M. 27	796
DSIR LLU M. 28	797
DSIR LLU M. 29	795
DSIR LLU M. 30	796
DSIR LLU M. 31	794
DSIR LLU M. 32	794
DSIR LLU M. 34	775
DSIR LLU M. 35	798
DSIR LLU M. 36	794
DSIR LLU M. 38	800
DSIR LLU M. 40	816
DSIR LLU M. 47	796
DSIR LLU M. 49	803
DSIR LLU M. 51	795
DSIR LLU M. 57	828
DSIR LLU M. 58	828
DSIR LLU M. 59	800
DSIR LLU M. 60	831
DSIR LLU M. 103	770
DSIR LLU M. 118	817
DSIR LLU M. 128	781
DSIR LLU M. 140	776
DSIR LLU M. 141	780
DSIR LLU M. 143	768
DSIR LLU M. 144	829
DSIR LLU M. 145	818
DSIR LLU M. 146	797
DSIR LLU M. 147	802
DSIR LLU M. 156	816
DSIR LLU M. 158	794
DSIR LLU M. 160	827
DSIR LLU M. 161	808
DSIR LLU M. 163	798
DSIR LLU M. 165	800
DSIR LLU M. 166	826
DSIR LLU M. 190	763
DSIR LLU M. 202	792
DSIR LLU M. 281-M. 282	802
F-TS-9442/V	801
F-TS-9640/III	757
F-TS-9697/V	772
FPLC Trans-128	814
FPLC Trans-129	814
FRBC Trans-76	802
FRBC Trans-217	765
FRBC Trans-235	801
HB-4272	807
HB-4365	819
HB-4560	822
HB-4596	805
HB-4610	822
HB-4633	822
HB-4640	822
HB-4642	806
HB-4644	821
HB-4645	820
HB-4668	808
IL-18	787
JPRS(DC)-589	810
JPRS(DC)-658	800
JPRS(DC)-849	758
JPRS(DC)-852	781
JPRS(DC)-856	758
JPRS(DC)-876	834
JPRS(DC)-904	760
JPRS(DC)-L-495	758
JPRS(DC)-L-898	782
JPRS(DC)-L-900	782
JPRS(DC)-L-904	808
JPRS(DC)-L-923	794
JPRS(DC)-L-972	781
JPRS(DC)-L-1842	765
JPRS(DC)-L-1856	757
JPRS(DC)-L-1857	785
JPRS(DC)-L-1858	785
JPRS(DC)-L-1859	784
JPRS(DC)-L-1860	784
JPRS(DC)-L-1861	784
JPRS(DC)-L-1862	784
JPRS(DC)-L-1863	784
JPRS(DC)-L-1864	785
JPRS(DC)-L-1865	792
JPRS(NY)-1548	795
JPRS(NY)-1594	783
JPRS(NY)-1802	762
JPRS(NY)-1839	806
JPRS(NY)-1863	759
JPRS(NY)-1866	792
JPRS(NY)-L-660	764
JPRS(NY)-L-940	767
JPRS(NY)-L-941	763
JPRS(NY)-L-951	760
JPRS(NY)-L-952	760
JPRS(NY)- L-954	760
JPRS(NY)-L-957	762
K-H Trans-8686b	774
MDF K-168	777
MDF K-191	831
MDF N-106	768

Number	Page
MDF V-134	768
MDF V-135	831
M-V Trans-2050 (59-18661)	800
M-V Trans-2057 (59-18657)	775
M-V Trans-2063 (59-18663)	816
M-V Trans-2124 (59-18655)	794
M-V Trans-2139 (59-18654)	794
M-V Trans-2158 (59-18653)	796
M-V Trans-2186 (59-18652)	795
M-V Trans-2189 (59-18651)	797
M-V Trans-2190 (59-18650)	796
M-V Trans-2207 (59-18648)	798
M-V Trans-2228 (59-18647)	798
M-V Trans-2235 (59-18645)	830
M-V Trans-2249 (59-18644)	829
M-V Trans-2268 (59-18643)	798
M-V Trans-2285 (59-18670)	796
M-V Trans-2292 (59-18641)	799
M-V Trans-2293 (59-18640)	799
M-V Trans-2294 (59-18634)	795
M-V Trans-2295 (59-18639)	796
M-V Trans-2296 (59-18638)	803
M-V Trans-2298 (59-18636)	799
M-V Trans-2301 (59-18672)	803
M-V Trans-2303 (59-18633)	797
M-V Trans-2304 (59-18674)	795
M-V Trans-2305 (59-18632)	798
M-V Trans-2306 (59-18631)	798
M-V Trans-2351 (59-18679)	828
M-V Trans-2353 (59-18680)	828
M-V Trans-2354 (59-18681)	828
M-V Trans-2355 (59-18682)	800
M-V Trans-2360 (59-18683)	831
M-V Trans-2373 (59-18628)	790
M-V Trans-2386 (59-18627)	804
M-V Trans-2388 (59-18626)	830
M-V Trans-2439 (59-18659)	794
M-V Trans-2440 (59-18658)	798
NAMRU Trans-13 (59-15898)	765
NAMRU Trans-17 (59-15726)	765
NASA CN-68105 (59-16786)	817
NP-tr-223 (59-17268)	777
NP-tr-241 (59-18831)	765
NRCC C-3002 (NRCC TT-800)	765
NRCC C-3030 (NRCC TT-801)	832
NRCC C-3083 (NRCC TT-802)	785
NRCC C-3084 (NRCC TT-803)	785
NRCC C-3085 (NRCC TT-804)	785
NRCC C-3099	814
NRCC C-3108	814
NRCC TT-785	775
NRCC TT-800	765
NRCC TT-801	832
NRCC TT-802	785
NRCC TT-803	785
NRCC TT-804	785
PA Trans-51 (59-19243)	780
RAE Trans-763 (59-18756)	797
RA Trans-764 (59-18755)	818
RAE Trans-770 (59-18751)	780
RAE Trans-772 (59-18754)	829
RAE Trans-776 (59-18753)	768
RAE Trans-788 (59-18739)	781
RIS 61053	813
RIS R-762	770
RIS R-765	769
RIS TB-180, sec. 1-4	813
RTP Trans-2373 (59-17689)	817
RTP Trans-2397 (59-17724)	818
RTP Trans-2472 (59-17711)	817
RTP Trans-2536 a (59-17672)	787
RTP Trans-2548 (59-17684)	826
TRS-1108 (59-18857)	809
RTS-1030 (59-18509)	799
RTS-1032 (59-19246)	761
RTS-1038 (59-18950)	777
RTS-1057 (59-18948)	814
RTS-1067 (59-19248)	784
RTS-1119 (59-19249)	804
RTS-2406 (59-17727)	817
RTS-2495 (59-17690)	787
TIL/T 4884 (59-18737)	817
UFO (59-19719)	757
SCL-T-232	782
SCL-T-257	797
PB 131 632-84	780
PB 131 891T-26	834
PB 131 891T-27	834
PB 131 891T-29	834
PB 131 891T-31	834
PB 141 001T-16	783
PB 141 002T-11	783
PB 141 014T-7	805
PB 141 014T-8	805
PB 141 015T-31	833
PB 141 015T-32	833
PB 141 015T-33	833
PB 141 015T-34	833
PB 141 016T-15	833
PB 141 017T-4	781
PB 141 018T-5	774
PB 141 018T-6	774
PB 141 019T-11	819
PB 141 026T-2	833
PB 141 026T-3	833
PB 141 027T-19	819
PB 141 033T-17	815
PB 141 037T-5	815
PB 141 037T-6	815
PB 141 041T-16	826
PB 141 045T-16	781
PB 141 045T-17	781
PB 141 045T-18	781
PB 141 045T-19	781
PB 141 049T-15	831
PB 141 049T-16	831
PB 141 050T-4	766
PB 141 050T-6	766
PB 141 052T-15	826
PB 141 052T-16	826
PB 141 055T-17	766
PB 141 056T-7	788
PB 141 058T-1	788
PB 141 059T-10	788
PB 141 060T-11	788
PB 141 061T-2	785
PB 141 061T-3	785
PB 141 062T-9	788
PB 141 068T-15	810

Number	Page
PB 141 070T-17	766
PB 141 070T-18	766
PB 141 071T-9	766
PB 141 072T-17	774
PB 141 073T-7	812
PB 141 074T-15	770
PB 141 075T-18	766
PB 141 076T-3	789
PB 141 082T-16	825
PB 141 082T-18	825
PB 141 082T-19	825
PB 141 083T-12	793
PB 141 084T-17	799
PB 141 085T-14	788
PB 141 089T-16	799
PB 141 090T-14	792
PB 141 092T-14	758
PB 141 092T-15	758
PB 141 094T-8	792
PB 141 083T-13	793
PB 141 099T-14	793
PB 141 101T-1	793
PB 141 101T-4	793
PB 141 102T-2	793
PB 141 106T-16	793
PB 141 106T-17	793
PB 141 107T-15	794
PB 141 107T-16	794
PB 141 110T-15	808
PB 141 110T-16	808
PB 141 112T-11	834
PB 141 116T-14	805
PB 141 124T-17	816
PB 141 124T-18	816
PB 141 124T-19	816
PB 141 125T-16	805
PB 141 125T-17	805
PB 141 130T-10	805
PB 141 130T-11	805
PB 141 131T-13	819
PB 141 134T-16	810
PB 141 134T-17	810
PB 141 135T-15	785
PB 141 138T-17	806
PB 141 138T-18	806
PB 141 139T-16	823
PB 141 140T-17	819
PB 141 140T-18	819
PB 141 140T-19	819
PB 141 219T	758